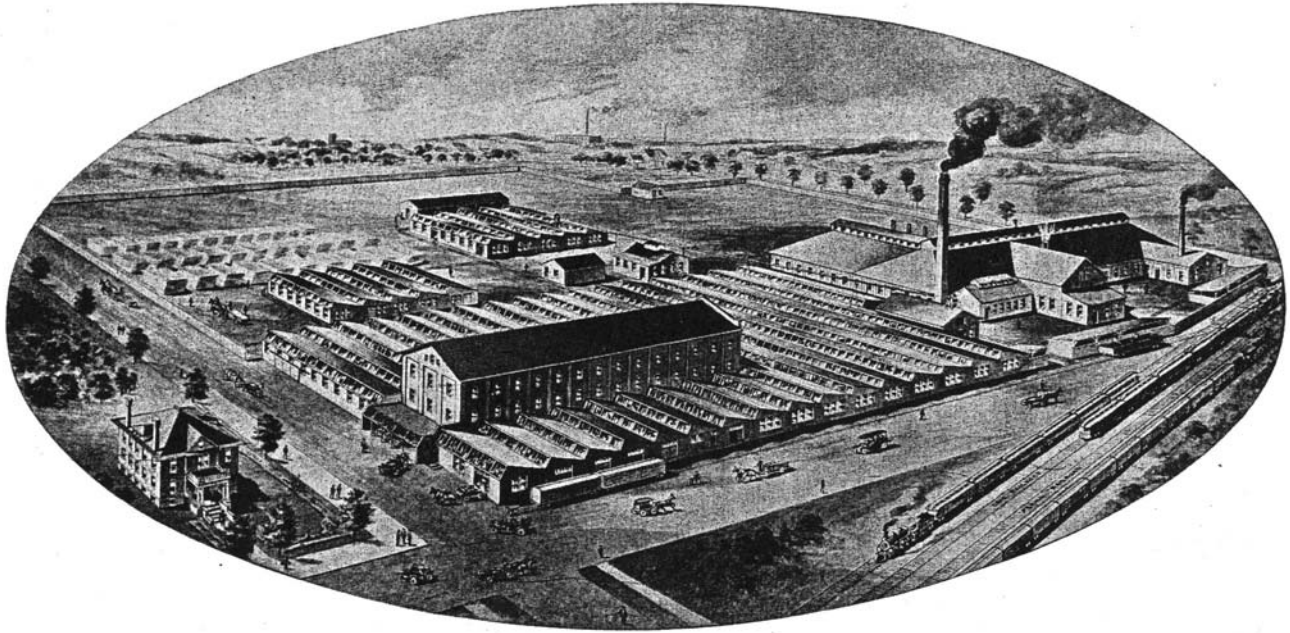

THE
SILVER
MANUFACTURING CO.
MACHINERY
CATALOG
1911
SALEM. OHIO.
U.S.A.

ET
65⁰⁰

The
Lyle Printing Co , Inc.
Press
Salem, Ohio



View of head office and works of THE SILVER MANUFACTURING CO., located in Salem, Ohio, U. S. A., showing switch connections with the Pennsylvania and Erie Railroads.

The plant is new and modern in every particular, having recently been thoroughly remodeled and greatly enlarged. The machine shop and erecting room alone have a ground floor space of approximately one acre. Since the above view was taken, large additions have been made, doubling the capacity of the foundry and blacksmith shops and materially increasing other departments.

1854 Fifty-Seventh Year 1911

CATALOG AND PRICE LIST

OF

CARRIAGE MAKERS' WOOD WORKERS' AND BLACKSMITHS' TOOLS

INCLUDING

Hub Boring Machines	**Jointers, Swing Saws**
Spoke Tenon Machines	**Drills, Hand and Power**
Band Saws, Saw Tables	**Portable Forges**

In addition to the above, we manufacture a complete line of Feed and Ensilage Cutters, also some Butchers' Tools. We shall be glad, upon application, to furnish separate catalogs covering these lines.

MANUFACTURED BY

THE SILVER MFG. COMPANY

SALEM, OHIO, U. S. A.

CABLE ADDRESS
"Silver" Salem
NEW YORK ADDRESS
125 East 23d Street

TELEGRAPHIC CODES
Western Union
A. B. C. 4th and 5th Edition
Liebers

THE CATALOG

IN order to keep our customers in touch with our latest improvements and additions, we have issued this catalog, which embraces all of the articles we manufacture in the Carriage Maker, Wood Working and Blacksmith lines, together with a complete repair list for same.

Code Words.—A cipher word is added to the price list, which may be used to specify articles when it becomes necessary to telegraph for goods.

Foreign Trade.—We have been shipping goods into foreign countries for the past forty-five years or longer, and each year's business shows an increase over that of the preceding one. We issue a special discount sheet to this trade which embraces cost of boxing goods for ocean shipment, etc. This information, together with the export weights and measurements given in the catalog, enables the buyer in foreign countries to figure the cost of these goods laid down at his own port.

The Goods.—They embrace several distinctive lines and all of the articles are standard makes, their merits and efficiency having been proven by years of practical use. Improvements are made from time to time, as necessity warrants, which keeps the various tools and machines abreast of the times.

Factory.—Although practically rebuilt and greatly enlarged during 1909, after the most approved factory designs, our rapid expansion since that time has necessitated large additions to various departments, in some cases doubling their capacity. The factory is commodious and convenient and is equipped with every facility for the proper and economic manufacture of goods. It is also equipped with modern and especially designed machinery which is adapted to this work.

Shipping.—The illustration of the works on a preceding page shows switch connections with the Pennsylvania and Erie Railroads, by means of which fuel and all materials are brought into the works and all carload shipments are taken out. We also endeavor to carry full stocks of goods and give the prompt execution of orders our special attention.

Manufacturing.—Exceptional care is exercised in this department and each part is correctly manufactured and the tools properly constructed and put together, so that they may operate accurately. We now ship to every state in the Union and to every civilized country. We shall continue to hold our goods to present high standard, make prompt shipments, treat our customers fairly and shall hope for a continuance of the liberal patronage which we have enjoyed in the past.

Very respectfully,

THE SILVER MANUFACTURING CO.

Silver's New Taper Hub-Boring Machine

With Self-Centering Hub Chuck and Quick-Acting Open Feed Nut

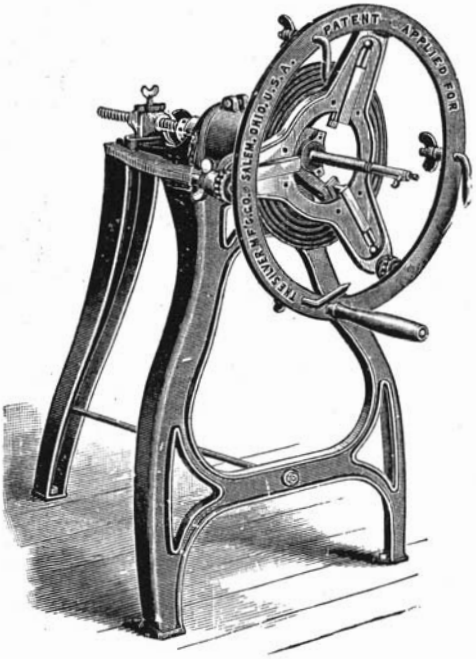


Fig. 709

Centers the Hub Instantly and Accurately

SIZES AND PRICES

No. 2	For light and medium work, up to 7¼x10 inch hubs, mounted on legs as shown, weight 150 lbs.....	$35.00	**Ofvid**
No. 2	For light and medium work, up to 7¼x10 inch hubs, without legs, to mount on bench, weight 80 lbs..	30.00	**Ofvuz**
No. 3	With two mandrels, for light and heavy work, up to 9½x13 inch hubs, mounted on legs as shown, weight 230 lbs.....	45.00	**Ofwer**
No. 3	With two mandrels, for light and heavy work, up to 9½x13 inch hubs, without legs, to mount on bench, weight 180 lbs.	40.00	**Ofwop**
	Extra bits, per set (four) for small mandrel.....	1.00	**Ogbac**
	Extra bits, per set (four) for large mandrel.....	1.00	**Ogbez**

No. 3 will be found as well adapted to light buggy wheels as the largest work for which it is recommended.

Boxed for Export

No. 2 Net 115 pounds, gross 190 pounds, 86 kilos., 8 cubic feet.
No. 3 Net 210 pounds, gross 295 pounds, 133 kilos., 9½ cubic feet.

DESCRIPTION

This machine is designed to bore holes in hubs of wheels in which to set the boxes, and it is operated by man power. It will bore straight or any desired taper and cut all necessary recesses, including that at the spokes; consequently, the box is set without wedging. Fasten the wheels to the face plate by means of the screw hooks, with the point of the hub turned toward the machine. The cutting bit is in the point of the mandrel, and the mandrel is held stationary. Set the mandrel to make a light cut and turn the wheel rapidly by means of the handle in the face plate. After making the cut it is only necessary to open the feed nut, and the mandrel is quickly withdrawn, ready for another cut. The taper is attained by throwing the back end of the mandrel to one side to a graduated scale. The wheel is trued at the rim by a simple adjustment of the face plate forward and backward.

The new and improved open feed nut is very simple in construction; it is quickly opened and closed by the movement of a collar backward and forward. This provides for the quick adjustment of the mandrel. There are no loose parts about the nut that might be lost or mislaid. The machine is provided with the Patent Self-Centering Scroll Chuck, so long and favorably known in connection with "Dole's Old Standard" machine, by means of which the wheel is instantly and accurately centered. It is held firmly to place by the aid of the clamps in the face plate. This insures a perfect hole.

The mandrel is steel and has the bearing close to the hub, which reduces the spring to a minimum. All parts are well made, of the best materials, and closely fitted.

The machine in the picture is mounted on a handsome stand, and can be located wherever wanted away from the work bench, and the user is free to go about the wheel without being cramped. Some prefer to have the machine on the bench, so it is furnished also without stand at less price, as is displayed in the price list.

It is made in two sizes, Nos. 2 and 3. The smaller size, No. 2, is especially designed for light and medium work; will bore holes from ⅞ to 2½ inches in diameter, 10 inches deep; the hub jaws will grasp from 2¼ to 5½ inches in diameter.

No. 3 is provided with two mandrels, thus adapting it to both light and heavy work; the small mandrel will bore holes from 1 to 2½ inches in diameter, 8½ inches deep; the large mandrel will bore holes from 1½ to 5 inches in diameter, 13½ inches deep; the hub jaws will grasp from 2½ to 7½ inches in diameter.

We do not recommend this machine for the heaviest class of work such as large logging trucks, for the reason that beyond certain sizes it is easier to handle the machine than the wheels. For such work we recommend Silver's Double-Chuck Taper Machine, Fig 714, or Silver's H. B. Machine, Fig. 710, Nos. 1½ and 2

Silver's Power Taper Hub-Boring Machine

ADAPTED ALSO FOR HAND USE.

With Self-Centering Hub Chuck and Quick-Acting Open Feed Nut

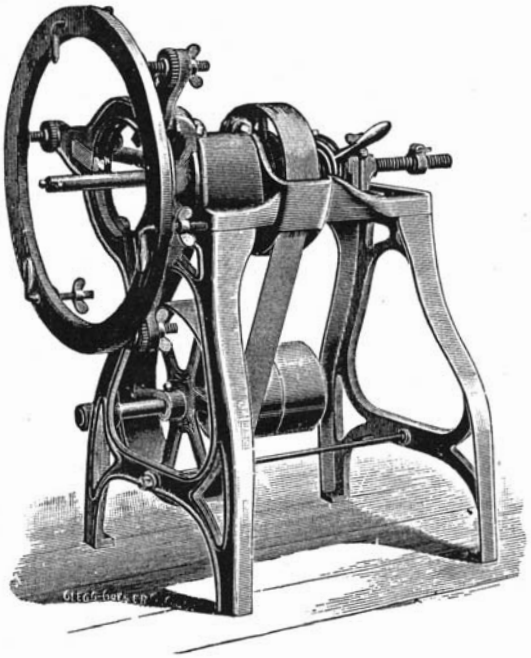


Fig. 708

See description on opposite page

Centers the Hub Instantly and Accurately

SIZES AND PRICES

With two mandrels for light and heavy work, up to hubs 7½ inches in diameter at point by 13 inches long, weight 385 pounds, floor space 32x34 inches	$75.00	**Ofxod**
Extra bits, per set, (five) for small mandrel	1.25	**Ogbig**
Extra bits, per set, (five) for large mandrel	1.25	**Ojros**

Boxed for Export

Net 355 pounds, gross 450 pounds, 204 kilos., 11½ cubic feet

DESCRIPTION OF FIG. 708

Illustrated on opposite page

This machine is designed to bore holes in hubs of wheels in which to set the boxes, and is usually driven by belt power, but can be successfully operated by hand. It is made in one size only, but is supplied with two mandrels, and is therefore as well adapted to boring light buggy wheels as the largest wheels for which it is recommended.

The small mandrel will bore holes from 1 to 2½ inches in diameter, 8½ inches deep; the large mandrel will bore holes from 1½ to 5 inches in diameter, 13½ inches deep; the hub jaws will grasp from 2½ to 7½ inches in diameter.

The machine will bore straight or any desired taper, and cut all necessary recesses, including that at the spokes, thus allowing the box to be set without wedging.

The wheel is attached and rigidly fastened to face plate by means of screw hooks (with point of hub toward machine), and is accurately trued at the rim by a simple adjustment of the hand screw wheels which are located back of the face plate or large ring.

The hub is instantly and accurately centered by means of the Patent Self-Centering Scroll Chuck, so long and favorably known in connection with "Dole's Old Standard" machine. This insures a perfect hole.

The taper is attained by throwing the back end of the mandrel to one side to a graduated scale.

The quick-acting feed nut is an important feature. The collar that opens and closes the nut is shifted by the forward and backward movement of the lever. By this means the feed can be quickly stopped and started, and gives the operator control of the work. It is a simple and efficient feeding device, and admits of necessary adjustment of the mandrel without stopping the machine.

We do not claim for this machine that it will do the work of a universal wheel machine costing several hundred dollars, but where parties have power and have been boxing their wheels by hand we recommend this machine.

It is well designed and is amply strong and stiff to carry wheels up to sizes specified in price list. It will do the work expeditiously and accurately, which adapts it to the use of those making from fifty to one hundred or more of what are termed "hand made" or "made to order" jobs in a year, where each part is well made and correctly fitted.

Its capacity is three to four sets of wheels per hour.

The countershaft is made a part of the machine, and is provided with tight and loose pulleys and belt as shown. The face plate is provided with a handle, which adapts the machine also for hand use.

Size of pulleys on countershaft, 12x3 inches.

Speed for countershaft, 100 to 125 revolutions per minute.

Silver's Old Standard Hub-Boxing Machine

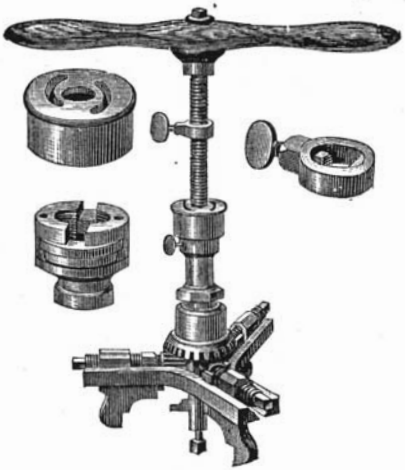


Fig. 710

This machine is of more recent construction than the Dole Hub-Boxing Machine, and combines all the good qualities of that popular machine, besides having some features not possessed by it. The open feed nut, which admits of withdrawing the mandrel from the hub after boring the required depth, by simply turning the cap to the left, is an important consideration. The peculiar form of the chuck admits of a better view of the work, while the movement of the jaws being effected by the aid of screw pinions working directly through the jaws, gives the machine great power for clamping the hub. The jaws are arranged with two shoulders for clamping large and small hubs, and are provided with sharp steel plates for gripping patent wheels with iron bands.

Machine No. 1 will bore holes 1¾ to 5 inches diameter, 6½ inches deep, and will grasp hubs 2 to 9½ inches diameter measuring at the end.

Machine No. 1½ will bore holes 1¾ to 5 inches diameter, 8 inches deep, and will grasp hubs 3 to 12½ inches diameter, measuring at the end.

Machine No. 2 is intended only for very large, heavy wheels, and is sold principally in foreign countries. It will bore 2⅛ to 6 inches diameter, 12½ inches deep, and will grasp hubs 9 to 14½ inches diameter, measuring at the end.

When ordered we furnish No. 1 with an extra small mandrel and bit, making it suitable for light work. This machine will not bore tapering.

By making slight changes and adjustments in the bits and mandrels, the user can vary the range of work somewhat from sizes given herein.

SIZES AND PRICES

No. 1	For medium and heavy work, up to 11x13-inch hubs, weight, 23 lbs.	$25.00	**Ofylk**
No. 1½	For medium and heavy work, up to 13x16-inch hubs, weight, 40 lbs.	30.00	**Ofyrt**
No. 2	For extra heavy work, up to 16x24-inch hubs, weight, 70 lbs	35.00	**Ofzin**
	Extra mandrel and bits for light work, for No. 1...	3.00	**Ofzub**
	Bits per set (four), for No. 1 and No. 1½	.75	**Ogaoj**
	Bits per set (four), for No. 2	1.00	**Ogasm**

Boxed for Export

No. 1	Net 23 pounds,	gross 50 pounds, 23 kilos.,	1⅞ cubic feet
No. 1½	Net 40 pounds,	gross 85 pounds, 39 kilos,	3½ cubic feet
No. 2	Net 70 pounds,	gross 100 pounds, 45 kilos.,	4 cubic feet

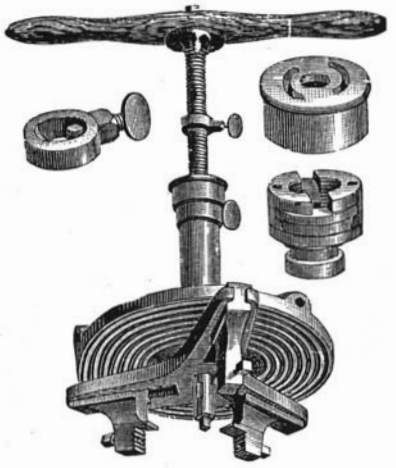


Fig. 711

Dole's Old Standard Hub-Boxing Machine

With Silver's Patent Open Adjustable Feed Nut

This cut represents Dole's Old Standard Hub-Boxing Machine, with Silver's Patent Open Adjustable Feed Nut. It is still made with the solid feed nut, but with the addition of the Silver's Open Feed Nut it is regarded as more desirable as it admits of the mandrel being drawn from the hub with one motion, instead of screwing it back.

Machine No. 1 is suitable for buggy and carriage work. It will bore holes from 1¾ to 5 inches in diameter, 4½ inches deep, and by reversing the wheel, 9 inches deep. The hub jaws will grasp from 2 to 7 inches in diameter.

Machine No. 2 is suitable for buggy, carriage and wagon work. It will bore holes from 1¾ to 5 inches in diameter, 4½ inches deep, and by reversing the wheel, 9 inches deep. The hub jaws will grasp from 2 to 12 inches in diameter.

Machine No. 3 is suitable for all the heaviest class of wagon work. It will bore holes from 2 to 5½ inches in diameter, 7½ inches deep, and by reversing the wheel, 15 inches deep. The hub jaws will grasp from 2½ to 15 inches in diameter.

When ordered we furnish the Nos. 1 and 2 with an extra mandrel made light at the end, with an extra set of small bits, which makes them suitable for the lightest class of work.

This is the original "Dole" Hub-Boxing Machine, invented by L. A. Dole in 1854. Our present large business was established on the manufacture and subsequent sale and success of this machine. This machine will not bore a taper hole.

SIZES AND PRICES

No. 1	Suitable for buggy and carriage work, weight net, 24 lbs.	$20.00	Ogath
No. 2	Suitable for buggy, carriage and wagon work, weight net, 28 lbs.	23.00	Ogauc
No. 3	Suitable for heavy wagon work, weight net, 40 lbs.	27.00	Ogava
	Special mandrel and bits for light work, No. 1 or No. 2	3.00	Ogawo
	Bits, per set, No. 1	.60	Ogaxe
	Bits, per set, No. 2	.75	Ogayo
	Bits, per set, No. 3	.85	Ogazi

Boxed for Export

Fig. 711	Nos. 1 or 2,	gross 40 pounds, 18 kilos., 2 cubic feet
Fig. 711	No. 3,	gross 70 pounds, 32 kilos., 2⅔ cubic feet

Silver's Patent Double Chuck Taper Hub-Boxing Machine

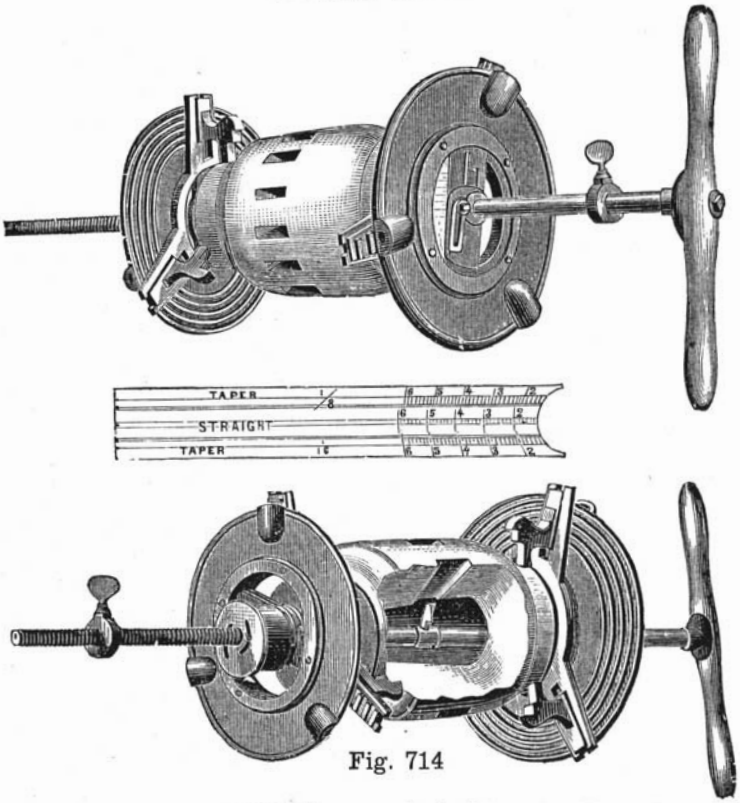


Fig. 714

This machine will bore straight or any desired taper, and is designed for use on large, heavy wheels that are cumbersome to handle, and too large for our improved machine, Fig. 709. Its work is accurate and the box is set perfectly without wedging.

It will bore 2 to 5½ inches diameter, 15½ inches deep.

The large chuck will grasp hubs 6 to 12 inches diameter, and the small one 3 to 9 inches. The engraving shows two views of the same machine. The upper one illustrates the chuck for the large end of the hub, with the device for varying the taper of the hole, and the lower one the reverse or chuck for the smaller end; cut also shows a view of Silver's Open Feed Nut, as applied to this machine, which provides for the free oscillation of the mandrel.

The adjustable rule enables the operator to set the bits for cutting a straight or taper hole any size desired.

SIZE AND PRICE

Complete, weight boxed 75 pounds	$35.00	Ogbuj
Bits, per set (four)	.75	Ogbyd

Boxed for Export

Net 55 pounds, gross 90 pounds, 41 kilos., 3 cubic feet

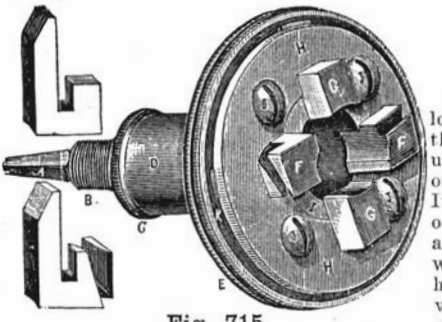


Fig. 715

The Celebrated "Star" Hollow Auger

Fig. 715 represents our new Star Hollow Augur. It is an improvement on the Dole Hollow Augur, which was manufactured by us for many years previous to the invention of the Star Augur. It combines all the valuable qualities of the Dole Augur, as well as some novel and desirable features of its own, and we confidently recommend it as the best hollow augur made. The bits are provided with two cutting edges, arranged at right angles with each other, one cutting the shoulder while the other pares off the surface of the tenon, leaving it a model for mechanical neatness. The adjustable shank shown in above illustration is furnished only with No. 1 Augur, and makes the augur suitable for use in the ordinary brace. This shank also serves to regulate the length of tenon. The form of the bits and blanks is also shown in the engraving.

We have supplied a number of manufacturers of universal wheel machinery with these augurs to go on their machines, consequently they are in use in most of the large wagon factories throughout the country. This is one of the strongest indorsements that could be given of the merits of this tool.

SIZES AND PRICES

No. 1	Augur, with adjustable shank, cutting tenons $\frac{7}{16}$ to 1 inch diameter	$ 7.00	Ogcad
No. 1	Augur, with round shank for power use, cutting tenons, $\frac{7}{16}$ to 1 inch diameter	7.00	Ogcec
No. 1	Augur, without shank, cutting tenons $\frac{7}{16}$ to 1 inch diameter	6.00	Ogcov
No. 2	Augur, cutting tenons $\frac{5}{8}$ to $1\frac{1}{4}$ inches diameter, 4 inches long, used on Fig. 717, No. 2, and Fig. 718 No. 3	13.00	Ogcus
No. 2	Augur, cutting tenons $\frac{5}{8}$ to $1\frac{1}{4}$ inches diameter, 6 inches long, used on Fig. 718, No. 3, when arranged to cut tenons 6 inches long	14.00	Ogcyx
No. 2	Augur, cutting tenons $\frac{5}{8}$ to $1\frac{1}{4}$ inches diameter, 6 inches long with large shank to suit Fig. 718, No. 4 and No. $4\frac{1}{2}$	15.00	Ogdak
No. 3	Augur, cutting tenons $\frac{3}{4}$ to $1\frac{1}{2}$ inches diameter, 4 inches long, used on Fig. 717, No. $2\frac{1}{2}$, and Fig. 718, No. $3\frac{1}{2}$	15.00	Ogdes
No. 3	Augur, cutting tenons $\frac{3}{4}$ to $1\frac{1}{2}$ inches diameter, 6 inches long, used on Fig. 718, No. $3\frac{1}{2}$, when arranged to cut tenons 6 inches long	16.00	Ogdot
No. 4	Augur, cutting tenons $1\frac{1}{4}$ to 2 inches diameter, 6 inches long	20.00	Ogdra

Bits and Blanks for the "Star" Augur

Bits for No. 1 Augur, per pair	$ 1.00	Ogduy
Bits for 2, 3 or 4 Augur, per pair	1.50	Ogian
Blanks for No. 1 Augur, per pair	.60	Ogiey
Blanks for No. 2, 3 or 4 Augur, per pair	.80	Ogihy

Bits and Blanks for the "Dole" Augur

Bits for No. 1 Augur, per pair	$ 1.00	Ogiis
Bits for No. 2 Augur, each (only one to an augur)	1.00	Ojcag
Blanks for No. 1 Augur, per pair	.60	Ojced
Blanks for No. 2 Augur, per pair	1.00	Ojcim
Files for sharpening the bits	.25	Ojcob
Oil stones for finishing same	.15	Ojcuk

No. 1 Augur can be adjusted to cut $\frac{3}{8}$-inch tenons when especially ordered.

Dole & Deming's Patent Spoke Tenon Machine

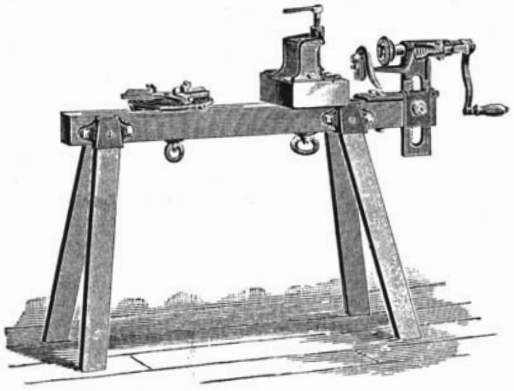


Fig. 716—No. 1

This cut represents our No. 1 Spoke Tenon Machine, which is adapted to hand use. It is fitted with our No. 1 Star Hollow Augur, and will cut tenons any size from $\frac{7}{16}$ to 1 inch. The hub is held in a self-centering chuck, which can be revolved to present the spokes to the hollow augur. The spokes are held firmly on the rest, and in line with the augur. Thus all tenons are cut with the shoulders uniform in width and in the same plane. With a slight transformation it can be changed into a boring machine, for boring the felloes for the spokes, giving that accuracy in the work that can be alone attained by machinery.

Our new illustration shows the felloe boring attachment on the machine as shipped. Bit chucks with ½-inch round hole always furnished with the felloe boring attachment unless otherwise ordered. When specially ordered we can furnish chuck with square hole, so the ordinary brace bits can be used in the machine. This size is now furnished complete with legs, as shown, without additional cost.

Boring bits to use in connection with felloe boring attachment are not included in price of machine, but will be found listed on another page.

Floor space for Fig 716, 20x45 inches.

SIZES AND PRICES

No. 1 With felloe boring attachment, weight 90 pounds...$23.00 **Ojcyn**
No. 1 Without felloe boring attachment, weight 80 pounds.. 18.00 **Ojdaz**

Boxed for Export

Net 90 pounds, gross 125 pounds, 57 kilos., 4 cubic feet

Dole & Deming's Patent Spoke Tenon Machine

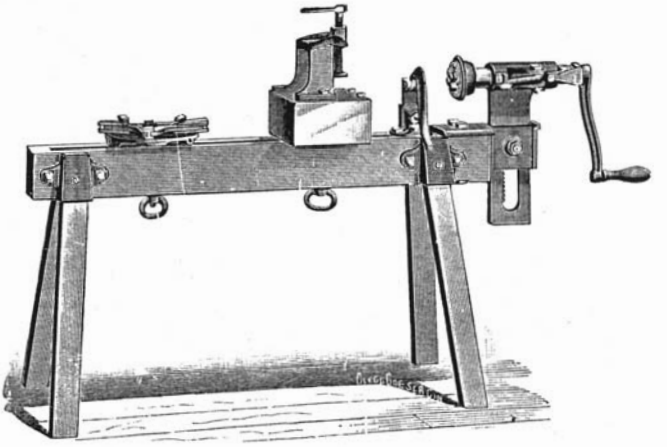


Fig. 717—Nos. 2 and 2½

The accompanying illustration represents our large Hand Tenon Machines, Nos. 2 and 2½. These machines are similar in construction to No. 1, Fig. 716, but intended for larger and heavier work. They are furnished with felloe boring attachment as shown. Round hole bit chuck for Cook's patent machine bits always sent, unless square hole chuck is ordered.

No. 2 is fitted with No. 2 Star Hollow Augur, and will cut tenons any size from ⅝ to 1¼ inches.

No. 2½ is fitted with No. 3 Augur, and will cut tenons any size from ¾ to 1½ inches.

When ordered we supply these machines with No. 1 Star Augur and reducer. The reducer renders the augurs interchangeable on the machines, and gives No. 2 a range of work from $\frac{7}{16}$ to 1¼, and No. 2½, $\frac{7}{16}$ to 1½ inches.

Boring Bits to use in connection with felloe boring attachment are not included in price of machines, but will be found listed on another page.

Floor space fo Fig 717, 23x56 inches.

SIZES AND PRICES

No. 2	With felloe boring attachment, cuts tenons ⅝ to 1¼ inches, weight 145 pounds	$32.00	Ojder
No. 2	Without felloe boring attachment, cuts tenons ⅝ to 1¼ inches, weight 125 pounds	25.00	Ojdio
No. 2½	With felloe boring attachment, cuts tenons ¾ to 1½ inches, weight 145 pounds	35.00	Ojdol
No. 2½	Without felloe boring attachment, cuts tenons ¾ to 1½ inches, weight 125 pounds	28.00	Ojdug
Either size, with No. 1 Augur and reducer, extra		8.00	Ojdyc

Boxed for Export

Net 145 pounds, gross 200 pounds, 91 kilos., 5⅓ Cubic feet

Dole & Deming's Patent Spoke Tenon Machine

For Hand or Power, Fitted with Star Hollow Auger

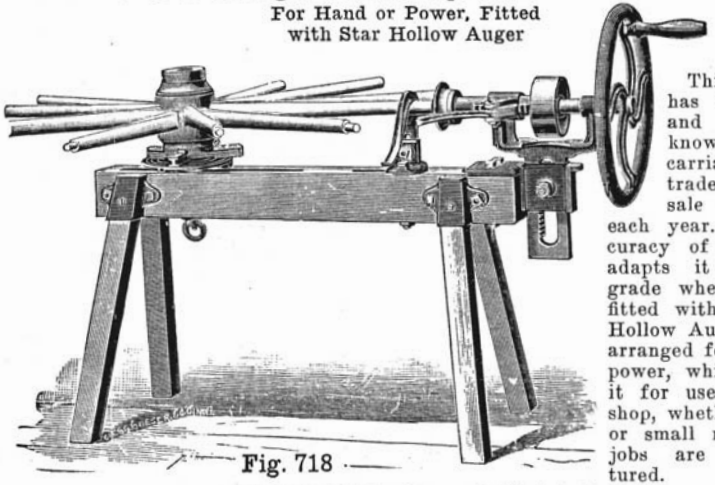


Fig. 718

This machine has been long and favorably known to the carriage tool trade and its sale increases each year. The accuracy of its work adapts it to high grade wheels. It is fitted with the Star Hollow Auger and is arranged for hand or power, which adapts it for use in every shop, whether a large or small number of jobs are manufactured.

A fly wheel and handle has lately been substituted for hand use instead of crank, which is regarded a marked improvement. When power is applied the wheel should be removed.

Another improvement is a machined cast iron way for head or main casting to move in, instead of the old-fashioned wooden way.

Felloe boring attachments with round hole bit chuck furnished with all machines unless otherwise ordered. See Fig. 717 for felloe boring attachment.

For price of boring bits see another page, these are extra.

Speed for power about 1,200 revolutions per minute.

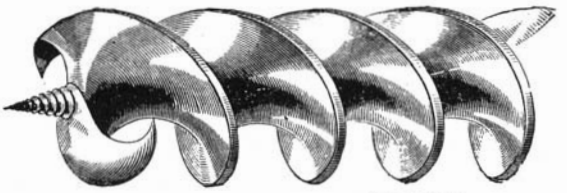
Floor space for Fig. 718, 23x58 inches.

SIZES AND PRICES

No. 3	With felloe boring attachment and No. 1 and No. 2 Augurs, cutting tenons $\frac{7}{16}$ to 1¼ inches diameter, 4 inches long, weight 175 pounds	$45.00	Ojfab
No. 3½	With felloe boring attachment and No 1 and No. 3 Augurs, cutting tenons $\frac{7}{16}$ to 1½ inches diameter, 4 inches long, weight 175 pounds	50.00	Ojfel
No. 4	With felloe boring attachment and No. 2 and No. 4 Augers, cutting tenons ⅝ to 2 inches diameter, 6 inches long, weight 230 pounds	60.00	Ojfid
No. 4½	With felloe boring attachment and No. 1, No. 2 and No. 4 Augurs, cutting tenons $\frac{7}{16}$ to 2 inches diameter, 4 inches long from $\frac{7}{16}$ to ⅝ inches diameter and 6 inches long from ⅝ to 2 inches diameter, weight 230 pounds	68.00	Ojfof
	Nos. 3 and 3½ furnished without No. 1 Auger and reducer at reduction of	8.00	Ojfux
	Any of the above sizes furnished without felloe boring attachment at reduction of	7.00	Ojfym
	Nos. 3 and 3½ arranged to cut tenons 6 inches long, additional	5.00	Ojgal
	Suitable countershaft, with tight and loose pulleys, for these machines	10.00	Ojgen

Boxed for Export

No. 3 or 3½. Net 175 pounds, gross 250 pounds, 113 kilos., 6⅓ cubic feet
No. 4 or 4½. Net 230 pounds, gross 345 pounds, 156 kilos., 9½ cubic feet



Round Lip Patent Machine Bit

Ojgip

½-Inch Round Shank, 6-Inch Twist

Fig. 870

Size, inches		1/4	5/16	3/8	7/16	1/2
Price, each		$0.65	.70	.75	.85	.90
Size, inches	9/16	5/8	11/16	3/4	13/16	7/8
Price, each	$0.95	1.05	1.15	1.25	1.40	1.50
Size, inches		1 3/8	1	1 1/16	1 1/8	1 3/16
Price, each		$1.60	1.70	1.85	2.00	2.10
Size, inches		1 1/4	1 5/16	1 3/8	1 7/16	1 1/2
Price, each		$2.25	2.35	2.50	2.60	2.75

These bits will fit all sizes of our tenon and boring machines.

Solid Center Patent Machine Bit

Ojgox

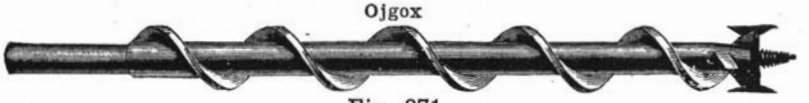


Fig. 871

½-Inch Round Shank, 6-Inch Twist—Has Double Cutters

Size, inches	1/4	5/16	3/8	7/16	1/2	9/16	5/8
Price, each	$0.65	.70	.75	.83	.90	1.00	1.10
Size, inches		11/16	3/4	13/16	7/8	15/16	1
Price, each		$1.20	1.30	1.40	1.50	1.60	1.70
Size, inches		1 1/16	1 1/8	1 3/16	1 1/4	1 5/16	1 3/8
Price, each		$1.80	1.90	2.00	2.10	2.20	2.30
Size, inches		1 7/16	1 1/2	1 5/8	1 3/4	1 7/8	2
Price, each		$2.40	2.50	2.75	3.00	3.25	3.50

These bits fit our spoke tenon and felloe boring machines.

Solid Center Patent Auger Bit

Fig. 872

Ojguz

Has Double Cutters

Size, inches	1/4	9/32	5/16	11/32	3/8	13/32	7/16
Price, each	$0.35	.35	.35	.35	.35	.38	.38
Size, inches		15/32	1/2	17/32	9/16	5/8	11/16
Price, each		$0.42	.42	.46	.46	.50	.58
Size, inches	3/4	13/16	7/8	15/16	1	1 1/16	1 1/8
Price, each	$0.58	.67	.67	.75	.75	.88	.88
Size, inches		1 3/16	1 1/4	1 5/16	1 3/8	1 7/16	1 1/2
Price, each		$1.00	1.00	1.13	1.13	1.23	1.23

Note—When a cipher word representing either of these bits is included in telegram order for spoke tenon machine it will be interpreted to mean that there is a complete set of bits wanted, of sizes to correspond with sizes of hollow augurs on the machine.

Dowel and Spoke Pointers

Dowel Pointer.

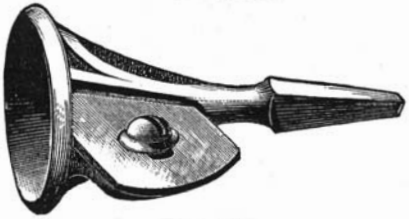


Fig. 723

Pointing from 0 to ¾ inch. List price, per dozen.....$ 5.00 **Ojgyb**

Packed one-half dozen in a box

Spoke Pointer No. 0

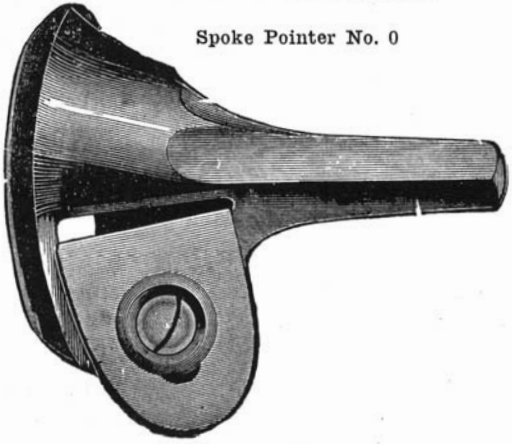


Fig. 724

Points 1⅞ inches in diameter. List prce, per dozen.....$ 6.50 **Ojhac**

Spoke Pointers Nos. 1 and 2

Fig. 726

With Graduated Adjustable Shank

List Price, No. 1. Points 1⅞ inches in diameter, per dozen..$ 9.00 **Ojhem**

List Price, No. 2. Points 2⅝ inches in diameter (large size), per dozen ..... 15.00 **Ojhop**

Packed one-half dozen in a box

SIZES AND PRICES OF BAND SAW BLADES

Saw	Length	¼-in.	⅜-in.	½-in.	⅝-in.	¾-in.	1-in.
20 in.	10 ft. 1 in., former length...	$1.10	$1.10	$1.20	$1.30	$1.40	$1.60
20 in.	10 ft. 5 in., present length...	1.15	1.20	1.25	1.35	1.45	1.65
26 in.	13 ft. 9 in.....	1.35	1.45	1.55	1.65	1.80	2.00
32 in.	16 ft. 4 in.....	1.55	1.65	1.80	1.95	2.10	2.45
36 in.	18 ft. 6 in.....	1.70	1.85	2.00	2.15	2.30	2.75

DIRECTIONS FOR BRAZING BAND SAW BLADES

Scarf the ends of saw off beveling with a file to make a lap joint. Let the bevel run back from the end of the blade about the distance of two teeth. Then put the blade into position in the brazing clamp, taking care that the back of the saw comes perfectly straight, and that the lap joints come nicely over each other in the middle of the clamp. Take a little pulverized borax, mixed with a few drops of water, to form a paste, and spread a small portion between the joint. Cut a small piece of soldering material as large as the joint, and insert this also between the laps; the saw is now ready to apply the heat. Heat the tongs to a good red heat, and apply them over the joint, holding them in position until the heat dies down to a low red, when the tongs can be removed and it then remains but to straighten the blade, and file the joint down to a uniform thickness with the rest of the blade, and the job is done.

For a soldering material, use silver solder or very thin sheet brass. The brass is much cheaper, and makes fully as good a joint as the silver solder, but requires a higher heat to melt it. For sheet brass make the tongs nearly to a welding heat. For silver solder, a bright red is sufficient.

The best way to pulverize the borax, is to put about three drops of water on a smooth slate, then rum a lump of borax on the slate, in the water until a paste is formed.

Always dress the joint down after brazing to the same thickness as the rest of the blade; otherwise, if left thicker the joint will wedge itself into the saw kerf, and break the blade at some other point.

Parties who have a gasoline blow torch (such as is used for paint-burner) can use same instead of the tongs, when silver solder is used. Care must be taken to have joints lay flat together before applying the torch. A piece of very thin wire wrapped tightly around the joint before applying torch will lessen the risk of a bad joint.

Silver's Improved Power Band Saw

20-Inch Iron Band Wheels

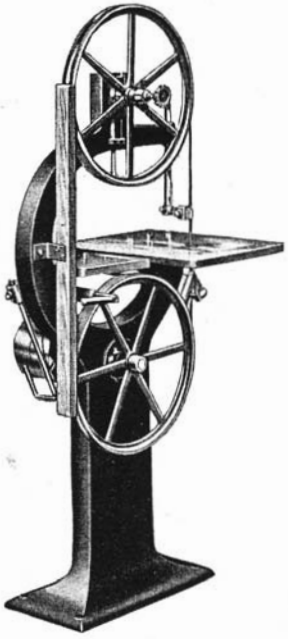


Fig. 720

SIZE AND PRICE

20-inch machine, with tight and loose pulleys, weight crated, 345 pounds	$40.00	Ojhuj
Extra saw blades, 10 feet 5 inches x ¼ inch, each	1.15	Ojiri
Wright's patent non-friction roller saw guide, extra list	6.00	Ojius

Boxed for Export

Net 320 pounds, gross 470 pounds, 213 kilos., 13⅔ cubic feet

DESCRIPTION OF FIG. 720

See illustration on opposite page

Band Saws are very much alike in the work they perform, but there is a vast difference in their durability and convenience of operation. The recent extensive improvements on our 20-inch band saw include the latest time and labor-saving attachments, among which we mention—

A new iron table, planed perfectly smooth, which cannot warp, as do wooden tables.

A belt shifter that can be used either above or below pulleys. It is within easy reach of operator's left hand, instead of low down under table.

A handsomely designed frame that rests on floor all around, insuring solidity and cleanliness.

An upper wheel adjustment on same side of machine as the operator when at work.

The up-and-down adjustment of the upper wheel is below, instead of above, said wheel, and may be conveniently reached by the operator, without changing his position.

The wheels are turned true and perfectly balanced. Rubber bands are securely cemented to rims. Upper wheel has up-and-down adjustment of several inches.

The table on our 20-inch saw can be tilted, for angle sawing, up to 45° by loosening a nut with an attached lever and can be firmly locked where desired.

DIMENSIONS OF 20-INCH SAW

Wheels—20½ inches diameter, 1⅜-inch face.

Size of table—18x22 inches.

Size of base—11½x23 inches.

Pulleys—7x3 inches; 3-inch belt.

Saw blade—10 feet 5 inches long; ¼ inch wide.

Floor space—24x30 inches.

Distance between saw and frame—20½ inches.

Height under saw guide when raised—9 inches.

Height over all—67 inches.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Two plain guides, brazing clamp and tongs, piece brazing material and one blade, ¼ inch wide, ready for use.

Silver's Planetary Foot Power Band Saw

20-Inch Iron Band Wheels

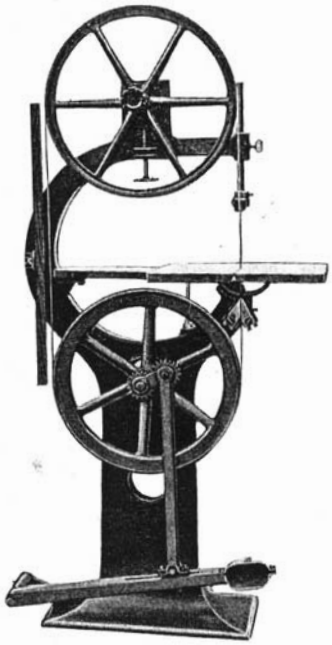


Fig. 721

SIZE AND PRICE

20-inch machine, foot power only, weight crated, 370 pounds..	$45.00	**Ojkad**
Extra saw blades, 10 feet 5 inches x ¼ inch, each.....	1.15	**Ojiri**
Wright's Patent Non-Friction roller saw guide, extra list....	6.00	**Ojius**

Boxed for Export

Net 350 pounds, gross 495 pounds, 224 kilos., 13⅔ cubic feet

DESCRIPTION OF FIG. 721

Illustrated on opposite page

The illustration on opposite page shows our new 20-inch Foot Power Band Saw, which embodies some splendid improvements. The table is of iron, planed perfectly smooth and can be tilted for angle sawing up to 45 degrees by loosening a nut with an attached lever. It can be firmly locked where desired. The entire frame is in one piece, cored out. It is heavy and symmetrical and the base rests on floor all around, insuring solidity and cleanliness. The operator can conveniently control upper wheel adjustment, saw guide, tension of saw blade and tilting of table, without changing position at saw.

The wheels are turned true and perfectly balanced. Rubber bands are securely cemented to rims.

The foot power mechanism on this machine is a decidedly novel as well as valuable feature. It is entirely of metal. The illustration will show at a glance the marvelous improvement over the usual complicated construction.

As indicated in the picture, two gears, of similar size and connected by links, are employed. One gear is keyed direct to the lower wheel shaft. The other, or drive gear, is attached to the upright pedal arm and cannot revolve itself except in a circle around the circumference of the first, whose revolutions it thereby increases twofold. In other words, for every complete movement of the pedal the band wheel revolves twice and the saw blade moves 25 feet.

The simplicity of this device as applied to band saws is at once apparent. There is absolutely nothing to get out of order and the neat appearance of the machine is greatly enhanced.

Extremely light running—a feature that will appeal strongly to those requiring a saw to be operated by foot power. The simple, direct planetary motion utilizes every ounce of power generated—and the amount needed is surprisingly low.

The length of stroke is readily adjustable to suit the operator.

DIMENSIONS OF FIG. 721

Wheels—20½ inches diameter; 1⅜-inch face.

Size of table—18x22 inches.

Size of base—11½x23 inches.

Gear wheels—3¼ inches diameter.

Shafting—1-inch steel.

Saw blade—10 feet 5 inches long; ¼ inch wide.

Floor space—24x30 inches.

Distance between saw and frame—20½ inches.

Height under saw guide when raised—9 inches.

Height over all—67 inches.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Two plain guides, brazing clamp and tongs, piece brazing material and one blade, ¼ inch wide, ready for use.

Silver's Planetary Combination Foot and Belt Power Band Saw

20-Inch Iron Band Wheels

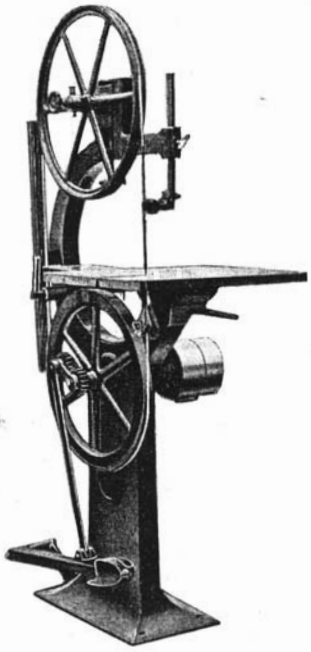


Fig. 722

SIZE AND PRICE

20-inch machine, combined foot and belt power, weight crated, 400 pounds	$50.00	Ojkep
Extra saw blades, 10 feet 5 inches x ¼ inch, each	1.15	Ojiri
Wright's patent non-friction roller saw guide, extra list	6.00	Ojius

Boxed for Export

Net 380 pounds, gross 525 pounds, 238 kilos, 14½ cubic feet

DESCRIPTION OF FIG. 722

Illustrated on opposite page

Simplicity and light running qualities of our new combined foot and belt power band saw stand right out so you cannot help seeing them.

The machine is provided with tight and loose pulleys as shown and with belt shifter that can be used either above or below pulleys, insuring a sure shift under any conditions.

The foot power mechanism is entirely of metal and is a marvelous improvement over the ordinary complicated construction. It is both novel and valuable.

Two gears are employed, as the picture indicates; they are of similar size and connected by links. One gear is keyed direct to the lower wheel shaft. The other, or drive gear, is attached to the upright pedal arm and cannot itself revolve except in a circle around the circumference of the first, whose revolutions it thereby increases two-fold. In other words, for every complete movement of the pedal the band wheel revolves twice and the saw blade moves 25 feet.

The simplicity of this device as applied to band saws is at once apparent. There is absolutely nothing to get out of order and the neat appearance of the machine is greatly enhanced.

The extremely light running features of this saw will appeal to those requiring a foot-power or light-power machine. The simple, direct planetary motion utilizes every ounce of power generated—and the amount needed is surprisingly low.

The operator can readily adjust the length of stroke to suit.

The table of the machine is of iron, planed perfectly smooth and can be tilted for angle sawing up to 45 degrees by loosening a nut with an attached lever. It can be firmly locked where desired. The entire frame is in one piece, cored out. It is heavy and symmetrical and the base rests on the floor all around, insuring solidity and cleanliness. The operator can conveniently control upper wheel adjustment, saw guide, belt shifter, tension of saw blade and tilting of table, without changing position at saw.

The wheels are turned true and perfectly balanced. Rubber bands are securely cemented to rims.

DIMENSIONS OF FIG. 722

Wheels—20½ inches diameter; 1⅜-inch face.
Size of table—18x22 inches.
Size of base—11½x23 inches.
Pulleys—7x3 inches; 3-inch belt.
Gear wheels—3¼ inches diameter.
Shafting—1-inch steel.
Saw blades—10 feet 5 inches long; ¼ inch wide.
Floor space—24x30 inches.
Distance between saw and frame—20½ inches.
Height under saw guide when raised—9 inches.
Height over all—67 inches.
Speed to run—300 to 400 revolutions per minute.
Regular Equipment—Two plain guides, brazing clamp and tongs, piece brazing material and one blade, ¼ inch wide, ready for use.

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide

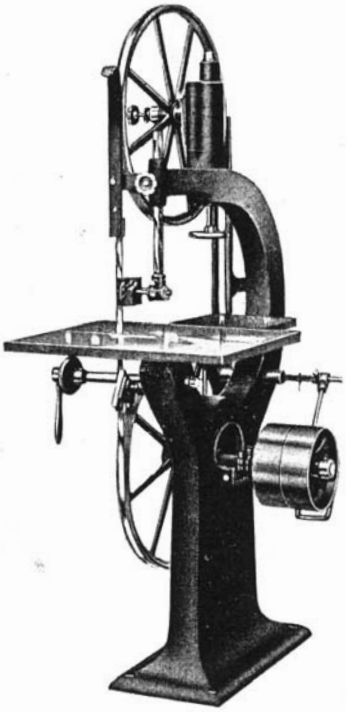


Fig. 820

26-Inch Iron Band Wheels

SIZE AND PRICE

26-inch machine, with tight and loose pulleys, weight crated, 695 pounds	$80.00	Ojkiz
Extra saw blades, 13 feet 9 inches x ⅜ inch, each	1.45	Ojkow
Extra for ripping gauge	8.00	Ojkur

Boxed for Export

Net 590 pounds, gross 790 pounds, 358 kilos., 24 cubic feet

DESCRIPTION OF FIG. 820

See illustration on opposite page

The general construction and design of our 26-inch, 32-inch and 36-inch Band Saws is very much the same; consequently aside from the difference in size and capacity, a description of one covers the three sizes.

While every part is worthy of mention, we will only refer to the special time and labor-saving features in the recent improvements. They include—

A new frame design, handsome in appearance, that rests on the floor on all sides, thus giving added strength and solidity and insuring cleanliness around the machine.

A new patented device for the table for angle sawing. A turn of a hand wheel loosens or rigidly fastens the table at any desired angle up to 45°.

A new belt shifter that can be used either above or below pulleys, making the shift a certainty no matter from what direction power is applied.

Instead of being low-down under the table, the shifter is now within easy reach of the operator's left hand and can be instantly fastened where desired by a turn of a thumb screw.

The position of the upper wheel adjustment has been changed, so that the operator can conveniently reach same while at work.

Rubber bands are securely cemented to the rims of wheels, which are turned true and perfectly balanced. Upper wheel has up-and-down adjustment of several inches, and is provided with spring tension which acts as a cushion for saw blade.

DIMENSIONS OF 26-INCH SAW

Wheels—26½ inches diameter, 1½-inch face.

Size of table—22x26 inches.

Size of base—13½x28 inches.

Pulleys—10x3 inches; 3-inch belt.

Saw blade—13 feet 9 inches long; ⅜ inch wide.

Floor space—30x40 inches.

Distance between saw and frame—26½ inches.

Height under saw guide when raised—10½ inches.

Height over all—79 inches.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Wright's Guide above table, plain guide below table, brazing clamp and tongs, brazing material and one ⅜-inch blade ready for use. Choice of any width blade up to one inch.

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide

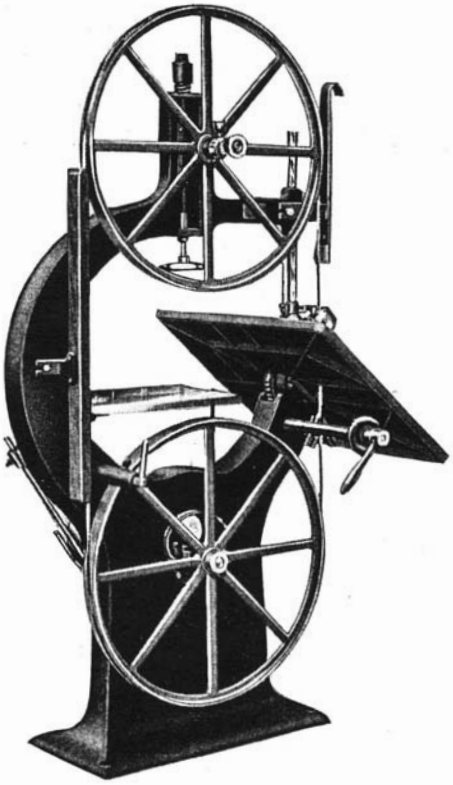


Fig. 822

32-Inch Iron Band Wheels

SIZE AND PRICE

32-inch machine, with tight and loose pulleys, weight crated, 1000 pounds	$105.00	**Ojkyg**
Extra saw blades, 16 feet, 4 inches x ½ inch, each	1.80	**Ojlas**
Extra for ripping gauge	8.00	**Ojlet**

See page 32 for illustration and price of this machine equipped with wood rim wheels.

Boxed for Export

Net 855 pounds, gross 1135 pounds, 515 kilos., 35⅔ cubic feet

DESCRIPTION OF FIG. 822

See illustration on opposite page

Our 32-inch Band Saw has the same new, handsome, symmetrical frame and the same valuable improvements that are features of the others of our line. The most important of these alterations is the new tilting device for angle sawing, whereby the table can be loosened or rigidly fastened in any desired position, by a turn of a hand wheel.

The other changes have been made principally for the purpose of simplifying the operation of the machine, by bringing all controlling or operating levers within convenient reach of the operator.

The belt shifter can be used either above or below pulleys. It is within easy reach of the operator's left hand, instead of low down under table.

The operator can adjust the upper wheel from his position at the machine while the latter is running, and also has full control of the up-and-down adjustment of upper wheel from the same position.

The wheels are turned true and perfectly balanced. Rubber bands are securely cemented to rims. Upper wheel has up-and-down adjustment of several inches, and is provided with spring tension which acts as a cushion for saw blade.

See page 32 for illustration and price of this machine, with wood rim wheels.

DIMENSIONS OF 32-INCH SAW

Wheels—32½ inches diameter; 1¾-inch face.

Size of table—25½x31 inches.

Size of base—16x32 inches.

Pulleys—12x3½ inches, 3½-inch belt.

Saw blade—16 feet 4 inches, ½-inch wide.

Floor space—35x48 inches.

Distance between saw and frame—32½ inches.

Height under saw guide when raised—13 inches.

Height over all—86 inches.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Wright's Guide above table, plain guide below table, brazing clamp and tongs, brazing material and one ½-inch blade ready for use. Choice of any width blade up to one inch.

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide

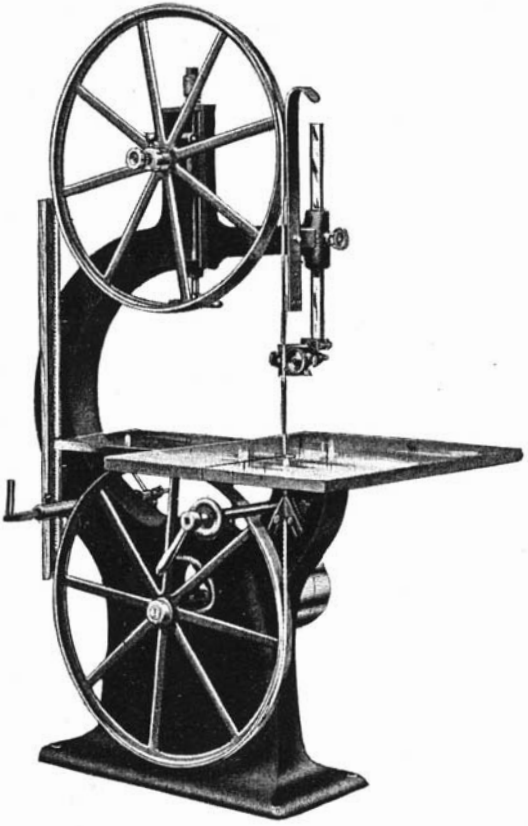


Fig. 824

36-Inch Iron Band Wheels

SIZE AND PRICE

36-inch machine, with tight and loose pulleys, weight crated 1300 pounds	$130.00	**Ojloy**
Extra saw blades, 18 feet 6 inches x ½ inch, each	2.00	**Ojmav**
Extra saw blades, 18 feet 6 inches x ¾ inch, each	2.30	**Ojmeg**
Extra for ripping gauge	10.00	**Ojmib**

See page 33 for illustration and price of this machine equipped with wood rim wheels.

Boxed for Export

Net 1195 pounds, gross 1510 pounds, 685 kilos., 48⅔ cubic feet

DESCRIPTION OF FIG. 824

See illustration on opposite page

Aside from one or two changes tending toward greater strength and solidity, and a more attractive appearance, all of the alterations on our 26, 32 and 36-inch saws have been for the purpose of making them the most conveniently operated machines on the market. Extreme simplicity marks every step.

The operator now makes no unnecessary moves, for he can shift the belt, adjust upper wheel, tighten the saw, lower or raise the guide and tilt the table without changing his position at saw.

Most of these changes are apparent in the illustration.

The operation of the new patented tilting mechanism is wonderfully simple. The table itself is attached to a segment, which is worked by a pinion on the crank or handle shaft, and a small hand wheel on this shaft serves to loosen or rigidly fasten the table at any desired angle up to 45°.

The belt shifter can be used either above or below the pulleys, insuring certainty in the shift, regardless of the direction from which the power is applied.

The new shape of the frame not only increases the strength of the machine but also gives it greater capacity.

The new base, resting on the floor all round, prevents the accumulation of dirt.

Wheels turned true and perfectly balanced, with rubber band securely cemented to face of same; a spring tension as a cushion for saw, and a balance weight for saw guide—these and other details are incidental but important features.

See page 33 for illustration and price of this machine equipped with wood rim wheels.

DESCRIPTION OF 36-INCH SAW

Wheels—36½ inches diameter; 2-inch face.

Size of table—31x38 inches.

Size of base—18x39 inches.

Pulleys—12x4 inches, 4-inch belt.

Saw blade—18 feet 6 inches, ¾ inch wide.

Floor space—39x57 inches.

Distance between saw and frame—36½ inches.

Height under saw guide when raised—16 inches.

Height over all—93 inches.

Speed to run—300 to 400 revolutions per minute.

Regular Equipment—Wright's Guide above table, plain guide below table, brazing clamp and tongs, brazing material and one ¾-inch blade ready for use. Choice of any width blade up to one inch.

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide

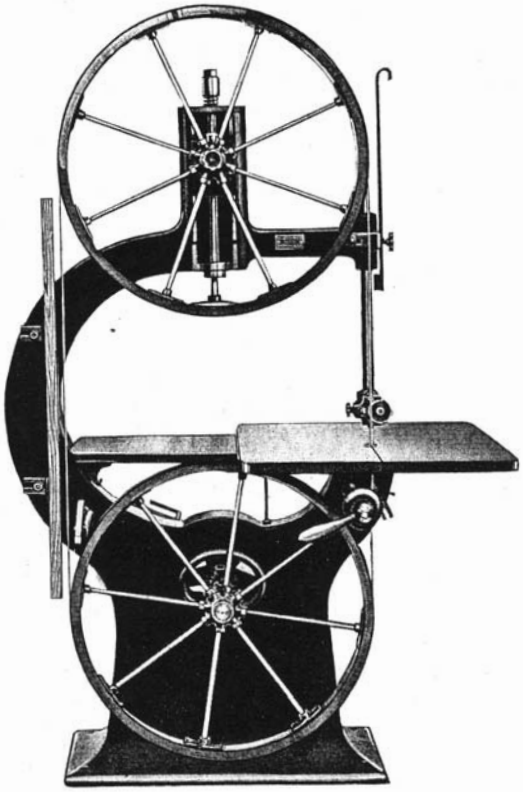


Fig. 823

32-Inch Wood Rim Band Wheels

This machine meets the demand of those who prefer wood rim to iron wheels. Aside from this feature, the description and dimensions on page 29 apply to this machine.

SIZE AND PRICE

32-inch machine, with tight and loose pulleys, weight crated, 975 pounds	$113.00	Ojmun
Extra saw blades, 16 feet, 4 inches x ½ inch, each	1.80	Ojlas
Extra for ripping gauge	8.00	Ojlet

Boxed for Export

Net 830 pounds, gross 1110 pounds, 503 kilos., 35⅔ cubic feet

Silver's Improved Power Band Saw

With Wright's Patent Non-Friction Roller Saw Guide

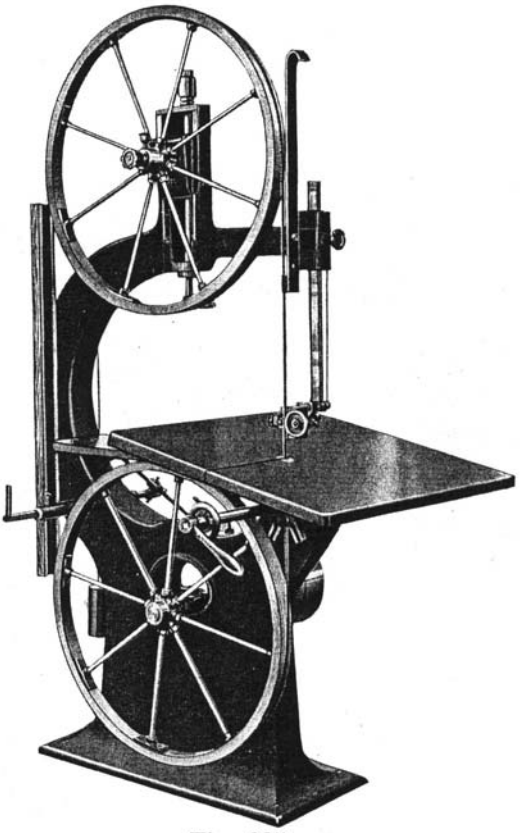


Fig. 825

36-Inch Wood Rim Band Wheels.

The wood rim wheels of this machine are accurately balanced and were designed to meet the demand of those who prefer wood rim to iron wheels. Otherwise the dimensions and description on page 31 apply.

SIZE AND PRICE

36-inch machine, with tight and loose pulleys, weight crated, 1275 pounds	$138.00	**Ojmod**
Extra saw blades, 18 feet, 6 inches x ½ inch, each	2.00	**Ojmav**
Extra saw blades, 18 feet 6 inches x ¾ inch, each	2.30	**Ojmeg**
Extra for ripping gauge	10.00	**Ojmib**

Boxed for Export

Net 1170 pounds, gross 1485 pounds, 673 kilos, 48⅔ cubic feet

Silver's New Jointers

Sizes 8, 12, 16, 20 and 24-Inch

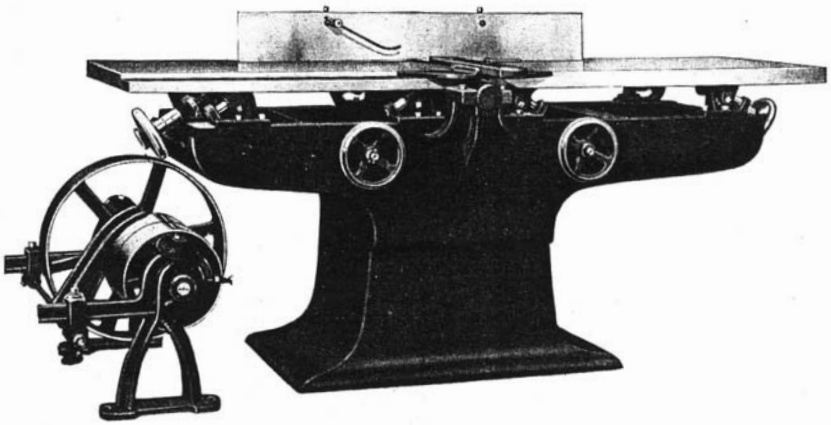


Fig. 890

SIZES AND PRICES

Complete with Countershaft as Shown

Size	FloorSpace Over All	Weight Crated	Boxed for Export Net	Gross		Price	
8 in.	22x68 in.	1025 lbs.	865 lbs.	1090 lbs.	494 kilos., 29¾ cu. ft.	$130.00	Ojnes
12 in.	30x80 in.	1425 lbs.	1240 lbs.	1535 lbs.	696 kilos., 46 cu. ft.	150.00	Ojnot
16 in.	34x80 in.	1590 lbs.	1355 lbs.	1850 lbs.	839 kilos., 53 cu. ft.	165.00	Ojnuy
20 in.	38x80 in.	1735 lbs.	1460 lbs.	2010 lbs.	912 kilos., 59½ cu. ft.	175.00	Ojory
24 in.	42x80 in.	1850 lbs.	1595 lbs.	2190 lbs.	993 kilos., 66½ cu. ft.	190.00	Ojoyt

---

Rabbetting table for 8-inch machine, extra	$ 7.50	Ojpat
Rabbetting table for larger sizes, extra	10.00	Ojpey

SILVER'S NEW JOINTERS

SPECIAL FEATURES

Steel pin inclines instead of slides or grooves for mounting table, mean absolute precision.

Movement and locking of table controlled by hand wheel.

Safety guard furnished with each machine.

The Silver Jointers—Are built from entirely new designs and patterns, and are made in five sizes, with 8, 12, 16, 20 and 24-inch knives.

The Frames—The frames are made in column form, of the most substantial construction, with large floor base.

Cylinder Head and Guard—The cylinder heads are milled from solid forged steel and are T slotted on two sides for moulding, rabbetting and other cutters. For the protection of operator, a movable guard covers the unused portion during work. Pulley is 4 inches diameter and of ample width for 4-inch belt. (One 8-inch machine, 3½-inch diameter for 2½-inch belt.)

The Journals—The journals on a jointer are very important. Therefore we have made them of good length and diameter and have lined them with the best copper-hardened babbitt. They are provided with large oil chambers and self-closing oilers. The journal on pulley side is 7 inches long; the one on operating side is 5 inches long and capped to prevent escape of oil.

Table Adjustments Unique—The vertical and longitudinal adjustments of the table are simple and unique. They are independent of one another, and can be regulated while the machine is at rest or in motion, to suit the thickness of cut or to close the gap over the head.

Steel Pin Inclines—The steel pin inclines on which tables are mounted are a decided improvement over the old slides or grooves. They are absolutely uniform, and have split bearings, clamped with set screws, to take up wear and keep table always firm. The vertical movement of table on these pins is controlled by hand wheel at end; and an auxiliary handwheel rigidly locks the table at any desired level.

Without disturbing this level in the least, the tables and attached sliding frame can be rapidly withdrawn from knives making same easy of access for sharpening, adjusting or substituting special cutters. This movement of table is governed by hand wheel on working side of machine, by means of cog rack and pinion—totally different from the ordinary construction. The same hand wheel, by clutch device, firmly locks the whole. This device is new and "patent applied for."

The sliding frame is dovetailed into main frame, with adjustable gibbs on side to take up wear.

Table Dimensions—Tables are of iron, planed perfectly smooth, are about 32½ inches from floor and the rear table is constructed for rabbetting. Lengths, front table 42 inches; rear, 36 inches. (On 8-inch machine, front 36 inches; rear 30 inches.)

When desired, a special rabbetting table to attach to regular table is furnished at extra cost. See price list.

Fence and Pressure Spring—The fence can be tilted to any angle from 90° to 45° and can be moved to cut full length of knives. A pressure spring is provided for holding the work to table.

The Countershaft—This has tight and loose pulleys 10 inches diameter by 5-inch face. Should be speeded about 800 revolutions to give the machine a speed of 4000 revolutions per minute. The loose pulley is self-oiling.

Silver's Plain Saw Table

With Safety Guard

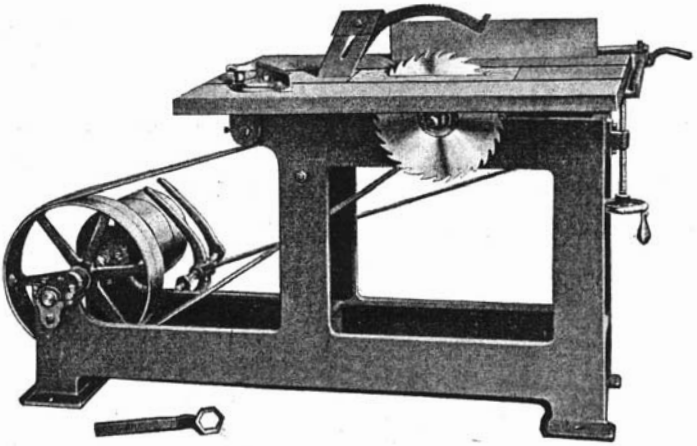


Fig. 891

SIZE AND PRICE

Saw table, complete with 12-inch saw (rip or cut off), weight crated, 775 pounds	$90.00	Ojnah
Extra saws, 12 inches in diameter, rip or cut off, each	3.75	Ojpij
Extra saws, 14 inches in diameter, rip or cut off, each	4.50	Ojplo
Boring attachment for saw table, extra	20.00	Ojpon

Boxed for Export

Net 735 pounds, gross 875 pounds, 397 kilos., 29¼ cubic feet

DESCRIPTION OF FIG. 891

For shop and factory use or for handling the ordinary run of work, this saw table is efficient and accurate and its low price commands attention.

The Stationary Saw, adjustable table and new frame design are practically the only points of difference from our Fig. 892 Saw Table.

Table on this machine is hinged at back of frame on one-inch steel shafting and the rise and fall at the front is regulated by screw and hand wheel. Table is of iron, in one piece, strongly ribbed and planed perfectly smooth. The cut-off or miter gauge slides in two grooves extending the entire length of table, one on each side of the saw line. It will miter to 45° either way. The wooden throat piece is removable for grooving. Grooving heads up to 2 inches wide may be used.

Frame is cast in one solid piece and is strong, and well proportioned.

Saw Mandrel is carried in well babbitted bearings set in top of the solid frame, so that vibration of saw is avoided. Journal caps, adjustable for wear, are held in place by four cap screws. Pulley on mandrel has 4⅞ inch face, machined all over. Mandrel is steel, 1⅜ inches diameter by 24 inches long.

Saw is 12 inches in diameter and projects three inches above table when level. It is easily removed by raising table or removing throat piece. Clamping collar is 4 inches diameter. Saws up to 14 inches diameter may be used.

Fences are entirely of metal, planed smooth and well finished. The ripping fence is held rigid by hand wheel at any angle up to 45°. It opens 18 inches from saw, any desired width being indicated by a scale cut to $\frac{1}{16}$ inch. Can be clamped at any point or can be entirely removed to leave table clear for special work.

Journal Bearings are all fitted with oil pocket and dust-proof, self closing oilers. They have generous wearing surface, are heavily babbitted and made with caps to take up wear.

Safety Guard is a feature not found on any similar machine—and a very desirable feature. It is attached to metal guard over saw, serving to protect the operator from injury.

Non-Creeping Belt Shifter is within easy reach of operator at right. The belt **stays** where set.

Countershaft is 30 inches long. It is supported in long bearings in end of solid frame. Tight and loose (self-oiling) pulleys are 10 inches diameter by 5 inch face and should be speeded 650 r. p. m. to give saw a speed of 3000 revolutions.

Boring Bit or Chuck can be fitted to rear end of arbor and a special boring attachment for the machine can be furnished upon request, at extra cost. See price list.

DIMENSIONS OF SAW TABLE—FIG. 891

Floor space	41x66 inches
Height of table	32 inches
Size of table, iron	31x38 inches
Size of mandrel for saw	1⅜x24 inches
Size mandrel hole for saw	1 inch
Diameter saw	12 inches
Distance saw to fence	18 inches
Vertical travel of Saw above table	3 inches
Journal bearings, saw mandrel 3½ inches long, countershaft	5 inches

Regular Equipment—One 12-inch saw, either cut-off or rip, one cut-off fence, one ripping fence, one nut wrench for mandrel and one safety guard for saw are furnished with each machine.

Silver's New Saw Table

With Safety Guard, and Pivoted Auxiliary Frame for Vertical Adjustment of Saw

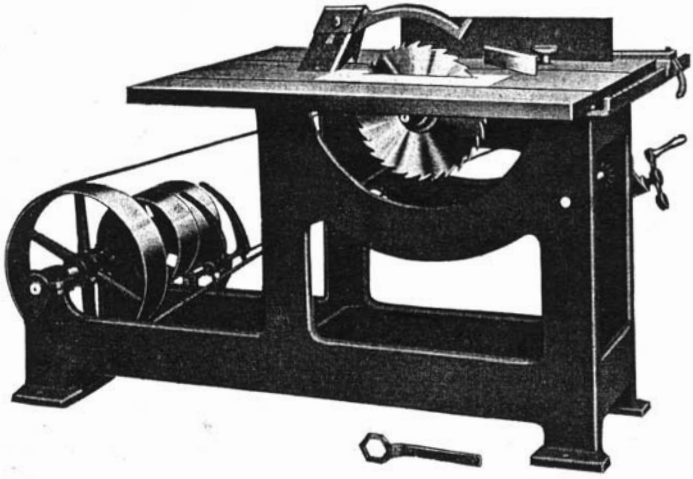


Fig. 892

SIZE AND PRICE

Saw table, complete with 12-inch saw (rip or cut off), weight crated, 825 pounds	$100.00	Ojphe
Extra saws, 12 inches in diameter, rip or cut off, each	3.75	Ojpij
Extra saws, 14 inches in diameter, rip or cut off, each	4.50	Ojplo
Boring attachment for saw table, extra	20.00	Ojpon

Boxed for Export

Net 785 pounds, gross 925 pounds, 420 kilos., 29¼ cubic feet.

SILVER'S NEW SAW TABLE

Utility—Silver's Saw Table is adapted for fine and accurate service At the same time, it is very rigid, and the construction is such that it will transmit ample power for the rougher and heavier work found in all wood-working shops.

The Table is of iron, in one piece, strongly ribbed and planed perfectly smooth. Two grooves extend its entire length, one on each side of the saw line, to receive the sliding miter gauge. The table is stationary, machined and firmly bolted to the solid frame. Has wooden throat-piece, removable for grooving. Grooving heads up to 2 inches wide may be used.

The Frame is symmetrical and its properly distributed weight eliminates vibration. It is cast in one solid piece.

The Saw Arbor or Mandrel is carried on a pivoted auxiliary frame beneath the table. Its vertical movement is regulated by a hand wheel operating on a segment gear. The saw remains at any level without locking.

The arbor is 24 inches long and 1⅜ inches in diameter, and is supported by two wide well babbitted bearings with journal caps to adjust wear. The pulley on arbor is machined all over.

Saws up to 14 inches diameter may be used.

Boring Bit or Chuck can be fitted to rear end of arbor, and a special boring attachment for the machine can be furnished upon request, at extra cost. See price list.

The Journal Bearings on both the saw arbor and the counter shaft are of good length, are heavily babbitted and are made with caps to take up wear. Fitted with dust-proof self-closing oilers.

The Fences are entirely of metal, properly machined and fitted. The ripping fence tilts to any angle up to 45° and is held rigid by hand wheel. It opens 18 inches from saw, the width of cut desired being indicated by a scale. Can be fastened by clamp at any point, or can be removed entirely to leave table clear for special work.

Guard over Saw is of metal. It is attached to table and provided with safety dog which serves to protect the operator from injury. This safety guard is a feature not found on any other similar machine.

Belt Shifter, within easy reach of operator. Has device to prevent belt from creeping back, wherever set.

The Countershaft is equipped with tight and loose (self-oiling) pulleys 10 inches diameter by 5-inch face, and should be speeded 650 r. p. m. to give saw a speed of 3000 revolutions. It is 30 inches long and has steel shaft running in long bearings on a rigid stand.

DIMENSIONS OF SAW TABLE—Fig. 892

Floor space	41x66 inches
Height of table	32 inches
Size of table (iron)	31x38 inches
Size of mandrel for saw	1⅜x24 inches
Size of mandrel hole for saw	1 inch
Diameter saw	12 inches
Distance saw to fence	18 inches
Vertical travel of saw above table	3 inches
Journal bearings on both mandrel and countershaft	4 inches long

Regular Equipment—One 12-inch saw (either cut-off or rip, one cut-off fence, one ripping fence, one nut wrench for mandrel and one safety guard for saw are furnished with each machine.

Silver's New Swing Cut-Off Saw

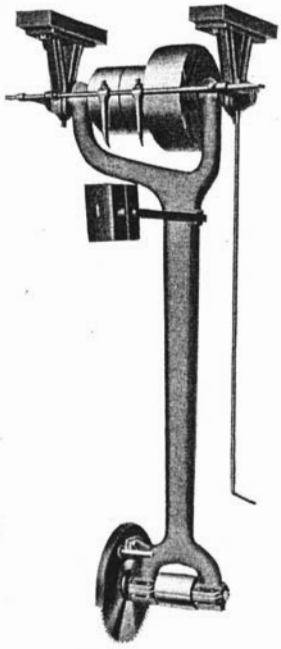


Fig. 894

SIZES AND PRICES

Swing saw, without saw or belt, weight crated, 475 pounds.....$45.00

6½	foot length.....	Ojpru
7	foot length.....	Ojpuh
7½	foot length.....	Ojpys
8	foot length.....	Ojray

Boxed for Export

6½ foot size, net 445 pounds, gross 615 pounds, 279 kilos., 15 cubic feet

Silver's New Swing Cut-Off Saw

Shown on opposite page

This addition to our line of high grade wood-working machinery is intended not only for the rough cutting usually done by such saws, but for those who require rapid, accurate and reliable results on fine work in hard wood for cabinet and pattern work, interior finish, etc. It is a strong, carefully designed machine in all its details. To suit different heights of ceilings we make it in four lengths.

The Frame is in the cored form, in one piece and very heavy. It is suspended from the countershaft close to hangers, in such a manner that its weight does not bind or interfere in any way with the free movement of the pulleys.

The Hangers have vertical adjustment for alignment. This adjustment also serves to equalize the wear of saw.

The Countershaft is supported in long bearings in the hangers. It does not revolve, moving only with the swing of the saw, and serves as arbor for sleeve bearing of the pulleys. This gives pulleys absolutely free play.

The Saw Arbor is of machinery steel, 1½ inches in diameter, ground to accurate size. The two long bearings in which it rests are adjustable for wear, are babbitted with best metal, and have dust-proof, self-closing oilers. Each bearing cap contains large oil pocket and is held in position by four large cap screws. The arbor pulley is machined all over.

The Shield for covering the saw and protecting the operator is made of cast iron, securely bolted to the main frame and can be quickly removed when desired.

The Belt Shifter can be used on either front or back of machine and the forks are also reversible, making a sure and easy shift under any condition of belting. The shifter is stationary, does not swing with the saw, and holds the belt without creeping.

DIMENSIONS OF SWING SAW—Fig. 894

Frame (four lengths)—Length from ceiling to center of arbor, 6½, 7 ,7½ and 8 Feet. Choice of any length at same price.

Saw Arbor—Diameter, 1½ inches. Length 18½ inches.
Diameter where saw is applied, 1⅛ inches. Length 2½ inches.
Diameter saw collars, 5 inches.
Bearings—Length 4½ inches.
Pulley—5 inches diameter, 6-inch face.

Countershaft—Length, 32½ inches. Diameter, 1⅜ inches.
Hangers, 9½ inches drop.
Tight and loose (self-oiling) pulleys, 10 inches diameter, 5-inch face.
Driving pulley, 16 inches diameter, 5½-inch face.
Speed, 550 r. p. m. giving saw a speed of 2000 r. p. m.

Floor Space—50x42 inches

Regular Equipment—When not otherwise specified, orders are filled with the 6½-foot machine, equipped with one 18-inch saw shield, mandrel wrench and belt shifter, but no belt or saw.
When desired, shield can be furnished for saws 24 inches and smaller instead of 18-inch shield, without extra cost.

Silver's Hand Post Drills

SINGLE GEARED, HAND FEED

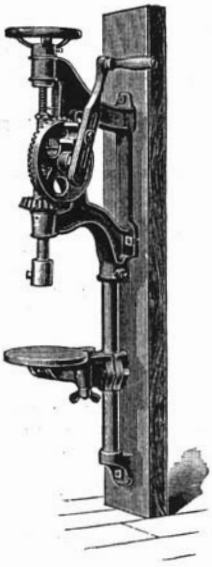


Fig 730—No. 1½

DOUBLE GEARED, SELF FEED

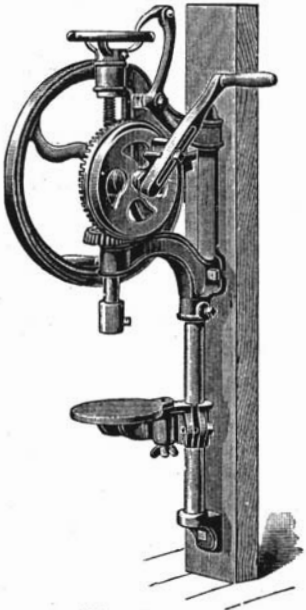


Fig. 731—No. 1

Perfect drills—strong, rapid and complete. Hand or continuous automatic feed. These drills are absolutely reliable in quality and workmanship—the product of the highest mechanical skill—and are finished in a very neat and attractive manner.

Dimensions—Fig. 730. Floor space over all, 8x13 inches. Height of drill 36 inches. Upright column diameter 1⅜ inches. Diameter of drive gear wheel 6½ inches, diameter of table 6 inches. Greatest distance of spindle to table 10½ inches. Drills ¾ inch to center of 12-inch circle. Drill spindle is 1-inch steel, and bored for ½-inch straight shank drills. Feed has run of 2½ inches. Upright column and feed screw are of **steel.**

Dimensions—Fig 731. Floor space over all, 9x16 inches. Total height 37 inches. Upright column, 1⅜ inches diameter. Drive gear wheel 8 inches diameter; table 6 inches diameter, greatest distance of spindle to table 10½ inches. Fly wheel diameter 14½ inches.

Has extension crank and adjustable feed. Drills ¾ inch to center of 12-inch circle. Drill spindle is 1 inch steel, and bored for ½-inch straight shank drills. Feed has run of 2½ inches. Upright column and feed screw are of **steel.**

SIZES AND PRICES

Fig 730, No. 1½. Weight 55 pounds	$6.00	**Ojreh**
Fig. 731, No. 1. Weight 80 pounds	8.00	**Ojriv**
Chuck for bit stock drills, to fit either size	1.00	**Ojsli**

Boxed for Export

Fig. 730 (2 drills). Net 102 pounds, gross 140 pounds, 63 kilos., 3 cubic **feet**
Fig. 731 (1 drill). Net 67 pounds, gross 100 pounds, 45 kilos., 3⅓ cubic **feet**

Silver's Hand Post Drills

DOUBLE GEARED, SELF FEED

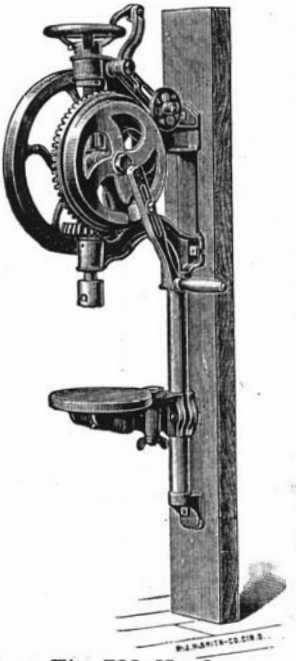


Fig. 732, No. 2

Built by skilled mechanics in our own factory, we guarantee every part of these drills to be a good part and able to perform its work accurately. Rigid and powerful, yet simple in construction, they will stand the hardest kind of service.

Dimensions—Fig. 732. Floor space over all, 10 x 16 inches. Has extension crank and adjustable feed. Drills 0 to 1 inch holes, and to center of 14½-inch circle. Drill spindle bored for ½-inch straight shank drills. Feed has run of 3 inches. Upright column, drill spindle and feed screw are of **steel.**

Total height 45 inches. Upright column $1\frac{3}{16}$ inches diameter; table 7 inches diameter; drive gear wheel 10 inches diameter; fly wheel 14 inches diameter; greatest distance of spindle to table 10½ inches.

DOUBLE GEARED, SELF FEED

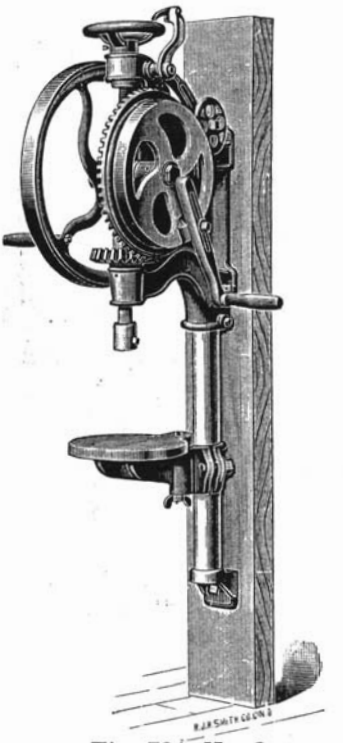


Fig. 734, No. 3

Dimensions—Fig. 734. Floor space over all, 15x19 inches. Has extension crank and variable feed. Drills 0 to 1¼-inch holes, and to center of 16-inch circle. Drill spindle bored for ½-inch straight shank drills. Feed has run of 3 inches. Upright column, drill spindle and feed screw are of **steel.**

Total height 49 inches; upright column 1⅞ inches diameter; table 8 inches diameter; drive gear wheel 12 inches diameter; fly wheel 16 inches diameter; greatest distance of spindle to table 13 inches.

SIZES AND PRICES

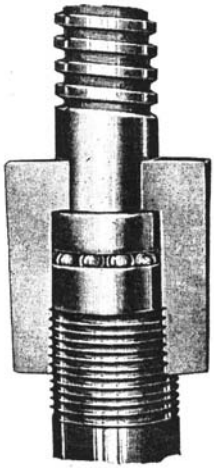
Fig. 732, No. 2. Weight 100 pounds	$10.00	**Ojrut**
Fig. 734, No. 3. Weight 140 pounds	14.00	**Ojsan**
Chuck for bit stock drills, to fit either size	1.00	**Ojsli**

Boxed for Export

Fig. 732. Net 95 pounds, gross 125 pounds, 57 kilos., 3 cubic feet
Fig. 734. Net 130 pounds, gross 175 pounds, 79 kilos., 4½ cubic feet

Silver's No. 21 Hand Post Drill

With Ball Bearings, Hand or Self Feed, Two Speeds



New Ball Bearing Feed Nut Used on Nos. 21 22, 23 and 24 Drills.

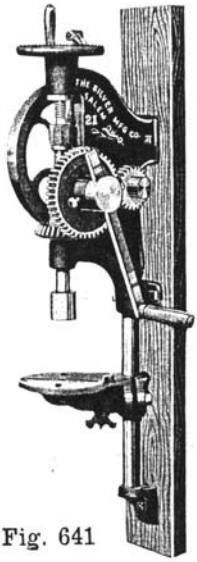


Fig. 641

For Hand Power Only

Fig. 641 is an excellent tool for light drilling of all kinds. It is constructed from entirely new patterns and is strong, rapid and complete. Has two speeds, changed by simply moving crank hub from one shaft to the other. Hand feed; or continuous self feed worked by cam on inside of main gear wheel and adjusted by thumb screw. Table adjustable up and down or sidewise.

The cross section of our new ball bearing feed nut shown above gives a good idea of the perfect frictionless construction of this important part of the spindle. This feed nut is complete in itself. It will be seen that the balls are absolutely dust-proof. They take the spindle thrust without any wear or lost motion whatever, and reduce the friction at this point to the minimum. The power required for running is reduced from 20 to 50 per cent. The ball bearings also overcome the necessity of frequent oiling. The balls are of first quality and are carried in discs or cups of best case hardened steel.

Dimensions—Size of spindle, 1 inch; run of spindle, 3 inches; size of column, 1⅜; greatest distance spindle to table, 10 inches; spindle turns 1½ times to 1 turn of crank on fast speed; crank turns 1½ times to 1 turn of spindle on slow speed; drills 1 inch to center of 12 inch circle. Upright column and spindle are of steel. Total height 38 inches.

SIZE AND PRICE

Fig 641, No. 21, for hand use only, as shown, weight crated, 80 lbs.	$ 8.50	**Ojsis**
Chuck for bit stock drills	1.00	**Ojsli**

Boxed for Export

Fig. 641. Net 75 pounds, gross 105 pounds, 48 kilos., 3⅓ cubic feet

Silver's No. 22 Self Feed Post Drill

WITH BALL BEARINGS AND INTERMEDIATE GEAR

Fast or Slow Speed

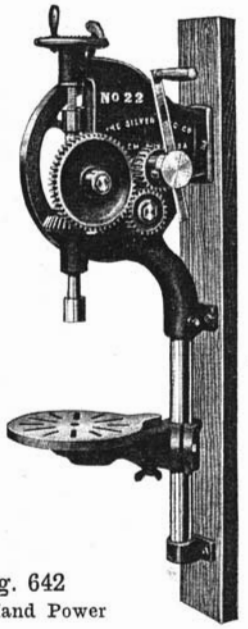


Fig. 642
For Hand Power

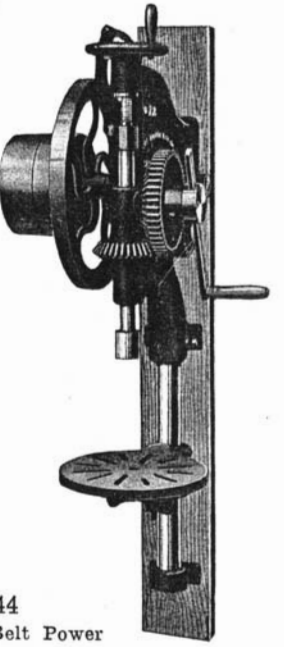


Fig. 644
For Hand or Belt Power

A perfect drill for light and medium work. The intermediate gear wheel eliminates necessity of turning crank reverse direction on slow speed. Has adjustable table. The ball bearing feed nut saves 20 to 50% in power; (see page 44). Balls of best quality steel are carried in case hardened steel discs.

Drill has ground bearings, machine molded gears, and automatic feeding device, which gives nearly a continuous feed, avoiding jamming and breaking of bits. The feed can be increased or diminished by simply turning a thumb screw.

Spindle and shafts are of steel, with bearings bored and reamed in solid frame.

Dimensions—Size of spindle, 1 inch; run of spindle, 3¾ inches; size of column, $1\frac{3}{16}$ inches; greatest distance of spindle to table 13 inches; spindle turns 1½ times to one turn of crank on fast speed; crank turns 1½ times to one turn of spindle on slow speed; drills to center of 15-inch circle and up to 1¼-inch holes; spindle bored for ½-inch round shank drills, unless otherwise ordered. Total height 48 inches.

Tight and loose pulleys measure 8x2½ inches. They should be speeded about 250 revolutions, which will turn the spindle 170.

SIZES AND PRICES

Fig. 642. No. 22, for hand use only, weight crated 115 lbs.	$10.00	Ojsnu
Fig. 644. No. 22, for hand or belt power, weight crated, 130 lbs.	14.00	Ojsoh
Chuck for Bit Stock Drills	1.00	Ojsli

Boxed for Export

Fig. 642. Net 105 pounds, gross 140 pounds, 63 kilos., 3¼ cubic feet
Fig. 644. Net 120 pounds, gross 155 pounds, 70 kilos., 3¼ cubic feet

Silver's No. 23 Self Feed Post Drill

WITH BALL BEARINGS AND INTERMEDIATE GEAR

Fast or Slow Speed

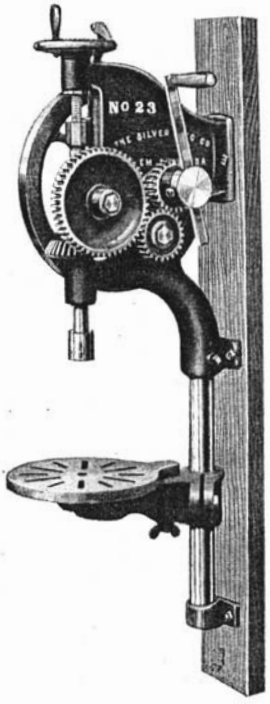


Fig. 646
For Hand Power

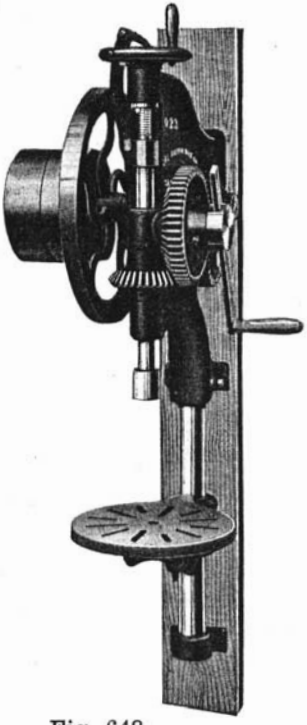


Fig. 648
For Hand or Belt Power

From 20 to 50 per cent. in power is saved by our Ball Bearing Feed Nut. See illustration and description, page 44. Intermediate gear eliminates the necessity of turning crank reverse direction on slow speed. Table moves up or down, or to either side. The Automatic Feeding device, located back of spindle, gives nearly a continuous feed. Feed can be regulated by thumb screw. Frame is neat and solid, cast in one piece. All bearings, like on high-priced drills, ground from the solid metal to working fit. Gears are machine molded and of perfect mesh. Spindle and shafts are of steel.

Dimensions—Size of spindle, 1⅛ inches; run of spindle, 4 inches; size of column, 2 inches; greatest distance of spindle to table, 16 inches; spindle turns 1½ times to 1 turn of crank on fast speed; crank turns 1½ times to 1 turn of spindle on slow speed; drills to center of 18-inch circle and up to 1½ inch holes. Spindle bored for ½-inch shank drills, unless otherwise ordered. Total height 50 inches. Tight and loose pulleys measure 8x2½ inches. They should be speeded about 250 revolutions, which will turn the spindle 170.

SIZES AND PRICES

Fig. 646	No. 23, for hand use only, weight crated 170 lbs....	$16.00	**Ojspe**
Fig. 648.	No. 23, for hand or belt power, weight crated 185 lbs.	20.00	**Ojsuw**
Chuck for Bit Stock Drills.....		1.00	**Ojsll**

Boxed for Export

Fig. 646.	Net 160 pounds,	gross 210 pounds,	94 kilos.,	4½	cubic	feet
Fig. 648.	Net 175 pounds,	gross 225 pounds,	102 kilos.,	5	cubic	feet

Silver's No. 24 Self Feed Post Drill

WITH BALL BEARINGS AND INTERMEDIATE GEAR

Fast or Slow Speed

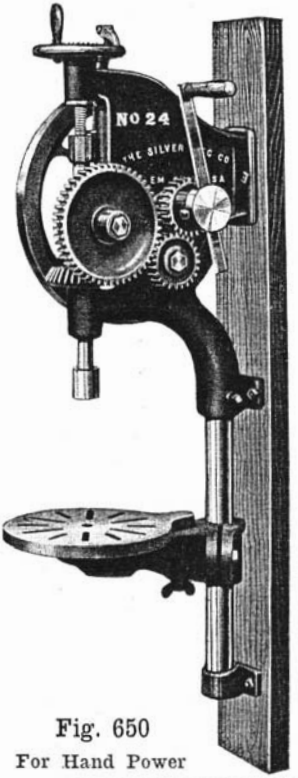


Fig. 650

For Hand Power

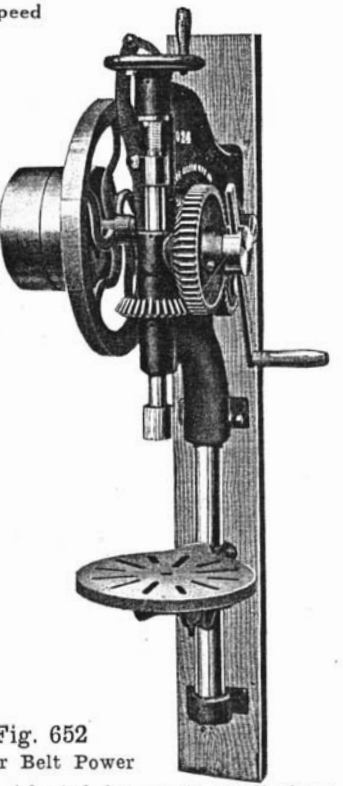


Fig. 652

Hand or Belt Power

Strong enough for heaviest hand drilling. Adapted for use in small shops, repair shops and iron furnaces. Has two speeds, self-feed, adjustable feed table, is well built and is durable. It is symmetrical in design and is recommended for all kinds of drilling.

Fig. 650 illustrates the slow speed position of crank. The intermediate gear eliminates the necessity of turning crank the reverse direction on this speed.

Equipped with new ball bearing feed nut, shown and described on page 44. Spindle and shafts are of steel. As on high priced drills, all bearings are bored out of solid metal and reamed to a working fit. Perfect mesh machine molded gears are used. The automatic feeding device, operated by cam inside of gear wheel, gives nearly a continuous feed and can be regulated by thumb screw.

Dimensions—Size of spindle, 1⅛ inches; run of spindle, 4¼ inches; size of column, 2¾ inches; greatest distance of spindle to table, 18 inches; spindle turns 1½ times to 1 turn of crank on fast speed; crank turns to 1½ times to 1 turn of spindle on slow speed; drills to center of 22-inch circle and up to 1½-inch holes; spindle bored for ½-inch shank drills, unless otherwise ordered. Total height, 54 inches. Tight and loose pulleys measure 8x2½ inches. They should be speeded about 250 revolutions, which will turn the spindle 170.

SIZES AND PRICES

Fig. 650, No. 24, for hand use only, as shown, weight crated, 230 pounds	$25.00	Ojswa
Fig. 652, No. 24, for hand or belt power, weight crated, 245 pounds	29.00	Ojtam
Chuck for bit stock drills	1.00	Ojsli

Boxed for Export

Fig. 650, net 215 pounds, gross 270 pounds, 122 kilos., 6¼ cubic feet
Fig. 652, net 235 pounds, gross 300 pounds, 136 kilos., 6¼ cubic feet

Silver's Power Post Drill

Lever Feed, 19-Inch Swing.

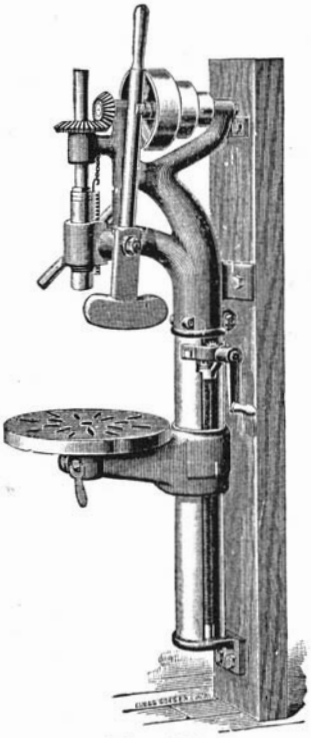


Fig. 727

Has machine cut gears and the workmanship throughout is first class. Weight crated, 350 pounds. (See description on opposite page.)

PRICE

Complete with countershaft	$60.00	Ojtek
V-shaped attachment for holding wheels to fit in supporting arm	2.00	Ojtin
Wheel-holding attachment to clamp to column, with spindle to go through wheel	5.00	Ojtoc

DESCRIPTION OF FIG. 727

Illustrated on opposite page

This drill is made from new patterns, and is especially designed for the use of carriage and wagon makers. It is also adapted to machine work and is suited to all kinds of repairs.

It has cut gears, and all parts are accurately machined and closely fitted.

Spindle has long feed lever for heavy work, and a short one for light work and **quick return.** It is counterbalanced by a weight in the hollow column, and the lever is balanced by a weight at its lower end, as shown, which serves to carry it to an upright position, out of the way of the operator, after use. The feed lever is also provided with our handy **stop latch,** which serves to disconnect it from the spindle and hold to upright position when using the quick-return lever.

Drill Table is quickly and easily raised or lowered by one hand of the operator, from his position at the drill, either standing or sitting. The table revolves in the supporting arm, and may be swung to the right or left, out from under the drill spindle.

The clamping screws that hold the table and supportng arm in position are provided with levers, thus avoiding the use of wrenches.

Countershaft has tight and loose pulleys, 8 inches diameter by 2¾ inch face, and should make 200 revolutions per minute.

Floor space over all, 14½x36 inches.

Height of drill—60 inches.

Diameter of column—4½ inches.

Diameter table—14½ inches.

Diameter spindle—$1\frac{3}{16}$ inches.

Vertical travel—6 inches.

Spindle bored for No. 2 Morse taper.

Greatest distance from spindle to table, 24 inches.

Diameter large pulley on cone, 7 inches; small pulley, 3 inches.

Cones carry 2-inch belt; countershaft pulleys, 2½ inch.

Drills to center of 19-inch circle.

Weight crated—350 pounds.

Boxed for Export

Net 315 pounds, gross 410 pounds, 186 kilos., 12 cubic feet

Bit Stock Drill Chuck

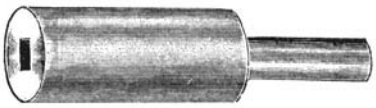


Fig. 737

Price .....$1.00 **Ojsli**
Made with ½ and ⅝-inch shanks.
Used in connection with "Silver's" Post Drills.

Silver's Drill Chuck

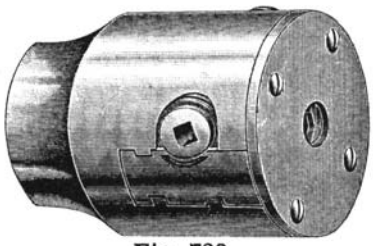


Fig. 738

Fig. 738 will hold drills from 0 to ¾-inch as listed. The jaws and screw are made of cast steel, carefully tempered. They are made to fit a taper plug, and may be ordered with or without arbor to attach to drill. This chuck is suited for use with any of the drills herein illustrated.

SIZES AND PRICES

No. 1. Holds straight shank drills 0 to ½-inch.....	$7.00	**Ojtuf**
No. 2. Holds straight shank drills 0 to ¾-inch.....	8.00	**Ojtyz**
Arbor for No. 1 Chuck, with ½-inch shank.....	.75	**Ojvaw**
Arbor for No. 1 Chuck, with 41/64-inch shank.....	.75	**Ojvez**
Arbor for No. 1 Chuck, with taper shank.....	1.20	**Ojvix**
Arbor for No. 2 Chuck, with 41/64-inch shank.....	1.00	**Ojvov**
Arbor for No. 2 Chuck, with taper shank.....	1.50	**Ojvul**

Advance Drill Chuck

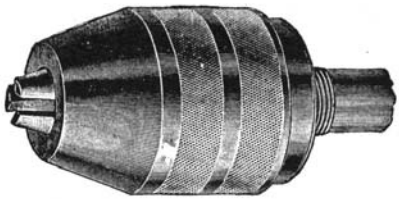


Fig. 740

A moderate priced chuck that is capable of good work. It is well made and has been thoroughly tested in the factory. It is smaller than the ordinary drill chuck, and is suited for use in connection with hand and light power drills illustrated herein. It is furnished with straight or taper shank, the former to fit the chuck to hand drills, the latter for power drill Fig. 727.

SIZES AND PRICES

No. 1. Holds straight shank drills 0 to ⅜-inch, with ½-inch straight shank	$3.50	**Ojvyr**
No. 1. Holds straight shank drills 0 to ⅜-inch, with 41-/64-inch straight shank	3.50	**Ojwaj**
No. 1. Holds straight shank drills 0 to ⅜-inch, with Morse taper shank	4.00	**Ojwir**
No. 2. Holds straight shank drills 0 to ½-inch, with ½-inch straight shank	4.75	**Ojwoz**
No. 2. Holds straight shank drills 0 to ½-inch, with 41/64-inch straight shank	4.75	**Ojwuc**
No. 2. Holds straight shank drills 0 to ½-inch, with Morse taper shank	5.25	**Ojwyk**

When not otherwise specified, the ½-in. straight shank is supplied with the chuck.

Drill Bits to Fit Hand Drills and Drill Chucks

Ojzar

Fig. 880

With Shanks 1/2-Inch Diameter

Size, inches	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32
Price, each	$0.45	.48	.50	.55	.60	.65	.70	.73	.75	.78	.80	.83
Size, inches							1/2	17/32	9/16	19/32	5/8	21/32
Price, each							$0.85	.88	.90	.95	1.05	1.10
Size, inches							11/16	23/32	3/4	25/32	13/16	27/32
Price, each							$1.15	1.20	1.25	1.30	1.35	1.40
Size, inches						7/8	29/32	15/16	31/32	1	1 1/32	1 1/16
Price, each						$1.45	1.50	1.60	1.70	1.80	1.90	2.00
Size, inches							1 3/32	1 1/8	1 5/32	1 3/16	1 7/32	1 1/4
Price, each							$2.10	2.20	2.25	2.30	2.35	2.40

Bit Stock Drills

Ojzef

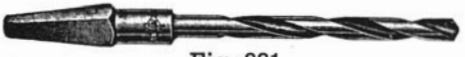


Fig. 881

Size, inches	1/16	3/32	1/8	5/32	3/16	7/32
Price, each	$0.14	.16	.20	.24	.29	.33
Size, inches	1/4	9/32	5/16	11/32	3/8	13/32
Price, each	$0.38	.43	.48	.54	.62	.68
Size, inches	7/16	15/32	1/2	17/32	9/16	5/8
Price, each	$0.75	.82	.87	.92	1.20	1.35
Size, inches	11/16	3/4	13/16	7/8	15/16	1
Price, each	$1.50	1.65	1.80	1.95	2.15	2.35

Straight Shank Twist Drills

Ojzik

Fig. 882

To Use in Drill Chucks

Size, inches	1/16	3/32	1/8	5/32	3/16	7/32	1/4	9/32
Price, each	$0.09	.11	.13	.16	.20	.23	.28	.32
Sizes, inches	5/16	11/32	3/8	13/32	7/16	15/32	1/2
Price, each	$0.37	.42	.48	.53	.59	.65	.70

Silver's 20-Inch Swing Drill

LEVER FEED

Round or Square Base

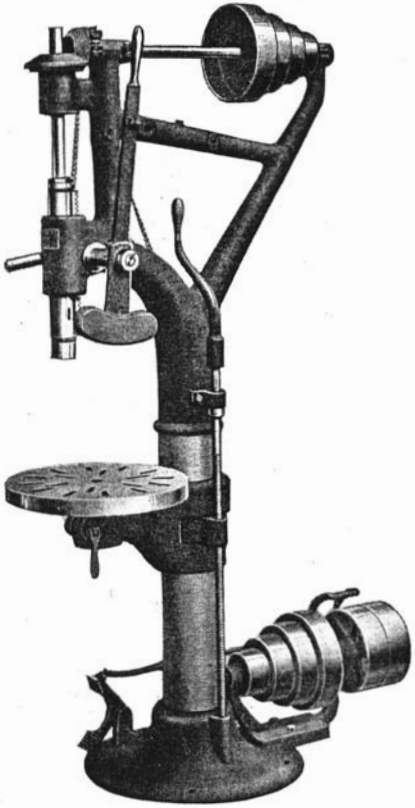


Fig. 855

Fig. 855 with round base, complete as shown; drive shaft with tight and loose pulleys, weight crated, 660 pounds.....	$85.00	**Ojzom**
Fig. 856 with square base, otherwise same as Fig. 855; weight crated, 700 pounds	90.00	**Ojzud**
Friction countershaft for tapping, either style, extra.....	10.00	**Okaif**
V-shaped attachment to fit in supporting arm, for holding wheels to drill the tires, on Fig. 855.....	2.00	**Okaly**
Wheel-holding attachment to clamp to column, with spindle to go through wheel, on Fig. 855.....	5.00	**Okame**

DESCRIPTION OF FIGS. 855 AND 856

Illustrated on opposite page

These Power Drills are made from entirely new patterns throughout and careful attention has been given to every detail of their manufacture. Only the best materials are used. The bevel gears are accurately cut from solid blanks, the cog rack is forged from steel and the teeth are milled to gauge. The top shaft has split bearings to permit of taking up wear.

The design is such as to promote strength and efficiency, and more simple and convenient operation.

It will be seen from the dimensions given below that solidity is a principal feature of the machines.

The Plain Lever Feed Drill, Fig. 855, has round base, and Fig. 856 has square base. Otherwise they are precisely the same.

Table has easy up-and-down adjustment and swings to either side.

When the tool is wanted only for drilling, the countershaft for it is provided with tight and loose pulleys, 8 inches diameter by 2¾-inch face, as shown in the accompanying engraving, and should make 200 revolutions per minute. For tapping and drilling, a friction countershaft is required.

Drive Shaft has tight and loose pulleys; turns 1⅔ times to 1 turn of spindle.

DIMENSIONS OF FIGS. 855 AND 856.

Height	68¼	inches
Diameter column	5½	inches
Diameter table	16	inches
Diameter spindle	1⅜	inches
Vertical travel of spindle	10	inches
Vertical travel of table	16	inches
Spindle bored for No. 3 Morse taper.		
Distance from column to center of table	10¼	inches
Distance from spindle to base	41⅛	inches
Distance from spindle to table	26⅝	inches
Diameter of crown gear	5 3/16	inches
Diameter of Bevel pinion	3⅜	inches
Diameter large pulley on cone	9¼	inches
Diameter small pulley on cone	4	inches
Cone carries 2-inch belt.		
Tight and loose pulleys	8x 2¾	inches
Floor space—square base	46x16	inches
Floor space—round base	36x20	inches

Boxed for Export

Fig. 855. Net 575 pounds, gross 740 pounds, 335 kilos., 22 cubic feet
Fig. 856. Net 605 pounds, gross 770 pounds, 350 kilos., 22⅛ cubic feet

Silver's 20-Inch Swing Drill

COMBINED LEVER AND WHEEL FEED

Round or Square Base

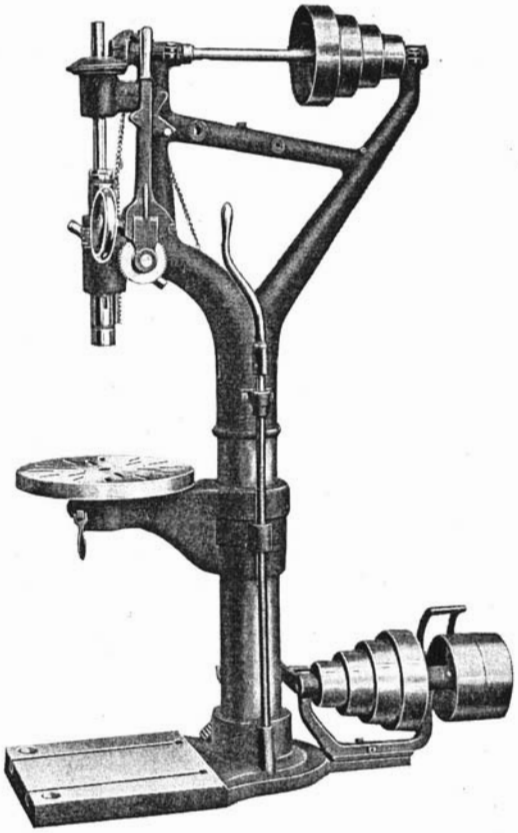


Fig. 858

Fig. 858 with square base, complete as shown; drive shaft with tight and loose pulleys, weight crated, 700 pounds.....	$95.00	**Okaap**
Fig. 857 with round base, otherwise same as Fig. 858; weight crated, 660 pounds	90.00	**Ojzyp**
Back gears, for either style, extra.....	20.00	**Okane**
Friction countershaft for tapping, either style, extra.....	10.00	**Okaif**
V-shaped attachment to fit in supporting arm, for holding wheels to drill the tires, on Fig. 857.....	2.00	**Okaly**
Wheel-holding attachment to clamp to column, with spindle to go through wheel, on Fig. 857.....	5.00	**Okame**

DESCRIPTION OF FIGS. 857 AND 858 DRILLS

Illustrated on opposite page

The Combined Lever and Wheel Feed Drills permit either the lever or the wheel to be used, without affecting the other. Aside from this they are not different from the Plain Lever Feed.

The patterns from which these drills are made are entirely new and the designs insure great strength and efficiency, also convenience of operation. They are well adapted to meet the up-to-date and exacting requirements of modern machine shop practice.

Their superiority in quality, design and finish stands right out so you cannot help seeing it.

As indicated in price list on other side, Figs. 857 and 858 differ only in the style of base (whether round or square).

Bevel gears are accurately cut from solid blanks, the cog rack is forged from steel and the teeth are milled to gauge.

The quality of the Drill is indicated by its substantial appearance. Every part is finished with special care and the materials used are the best procurable. All details have been carefully worked out. The top shaft has split bearings to permit of taking up wear.

Back gears can be furnished with this style drill when desired, as indicated in price list.

Table has easy up-and-down adjustment and swings to either side.

When the tool is wanted only for drilling, the countershaft for it is provided with tight and loose pulleys, 8 inches diameter by 2¾-inch face, as shown in the accompanying engraving, and should make 200 revolutions per minute. For tapping and drilling, a friction countershaft is required.

Drive Shaft has tight and loose pulleys; turns 1⅔ times to 1 turn of spindle.

DIMENSIONS OF FIGS. 857 AND 858

Height	68¼	inches
Diameter column	5½	inches
Diameter table	16	inches
Diameter spindle	1⅜	inches
Vertical travel of spindle	10	inches
Vertical travel of table	16	inches
Spindle bored for No. 3 Morse taper.		
Distance from column to center of table	10¼	inches
Distance from spindle to base	41⅛	inches
Distance from spindle to table	26⅝	inches
Diameter of crown gear	5 3/16	inches
Diameter of Bevel pinion	3⅜	inches
Diameter large pulley on cone	9¼	inches
Diameter small pulley on cone	4	inches
Cone carries 2-inch belt.		
Tight and loose pulleys	8x 2¾	inches
Floor space—square base	46x16	inches
Floor space—round base	36x20	inches

Boxed for Export

Fig. 857. Net 570 pounds, gross 750 pounds, 340 kilos., 22 cubic feet
Fig. 858. Net 600 pounds, gross 780 pounds, 354 kilos., 22⅓ cubic feet

Silver's 20-Inch Swing Drill

POWER FEED AND AUTOMATIC STOP

Round or Square Base

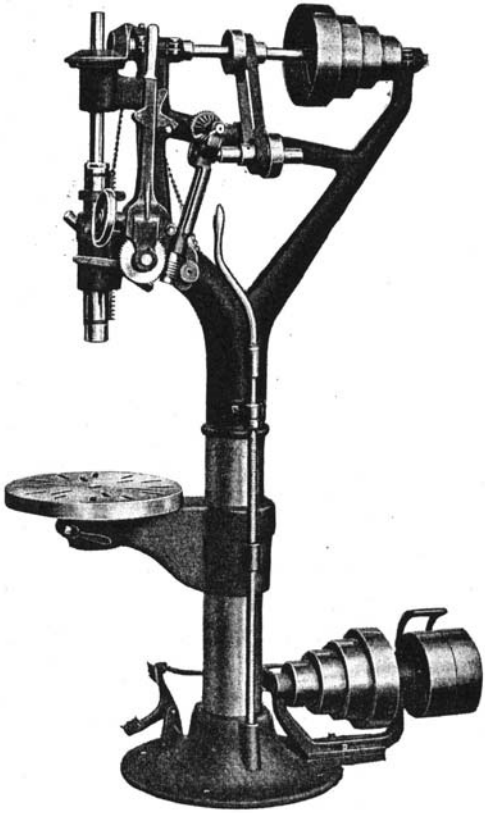


Fig. 859

Fig. 859 with round base, complete as shown; drive shaft with tight and loose pulleys, weight crated, 670 pounds.....	$110.00	**Okaci**
Fig. 860 with square base, otherwise same as Fig. 859; weight crated, 710 pounds	115.00	**Okaeb**
Friction countershaft for tapping, either style, extra.....	10.00	**Okaif**
V-shaped attachment to fit in supporting arm, for holding wheels to drill the tires, on Fig. 859.....	2.00	**Okaly**
Wheel-holding attachment to clamp to column, with spindle to to go through wheel, on Fig. 859.....	5.00	**Okame**

DESCRIPTION OF FIGS. 859 AND 860

Illustrated on opposite page

The Power Feed Drills with Automatic Stop, Figs. 859 and 860, are exactly the same in construction and design, with the exception of the style of base, as indicated in price list under illustration.

Simple and convenient operation, and strong construction are some of the features of the new designs that make for splendid efficiency.

The Power Feed and Automatic Stop requires only to be started and will stop automatically wherever set, at any required depth. This action is entirely independent of the wheel or the lever feed; either of these can be used in addition.

The Substantial Appearance Denotes Quality—New patterns throughout—every detail carefully worked out—materials the best procurable. Bevel gears accurately cut from solid blanks, the cog rack is forged from steel and the teeth are milled to gauge. The top shaft has split bearings to permit of taking up wear.

Table has easy up-and-down adjustment and swings to either side.

When the tool is wanted only for drilling, the countershaft for it is provided with tight and loose pulleys, 8 inches diameter by 2¾-inch face, as shown in the accompanying engraving, and should make 200 revolutions per minute. For tapping and drilling a friction countershaft is required.

Drive Shaft has tight and loose pulleys; turns 1⅔ times to 1 turn of spindle.

DIMENSIONS OF FIGS. 859 AND 860.

Height	68¼	inches
Diameter column	5½	inches
Diameter table	16	inches
Diameter spindle	1⅜	inches
Vertical travel of spindle	10	inches
Vertical travel of table	16	inches
Spindle bored for No. 3 Morse taper.		
Distance from column to center of table	10¼	inches
Distance from spindle to base	41⅛	inches
Distance from spindle to table	26⅝	inches
Diameter of crown gear	5 1/16	inches
Diameter of Bevel pinion	3⅜	inches
Diameter large pulley on cone	9¼	inches
Diameter small pulley on cone	4	inches
Cone carries 2-inch belt.		
Tight and loose pulleys	8x 2¾	inches
Floor space—square base	46x16	inches
Floor space—round base	36x20	inches

Boxed for Export

Fig. 859. Net 610 pounds, gross 785 pounds, 356 kilos., 22 cubic feet
Fig. 860. Net 630 pounds, gross 815 pounds, 370 kilos., 22⅓ cubic feet

Silver's 20-Inch Swing Drill

POWER FEED WITH BACK GEARS AND AUTOMATIC STOP

Round or Square Base

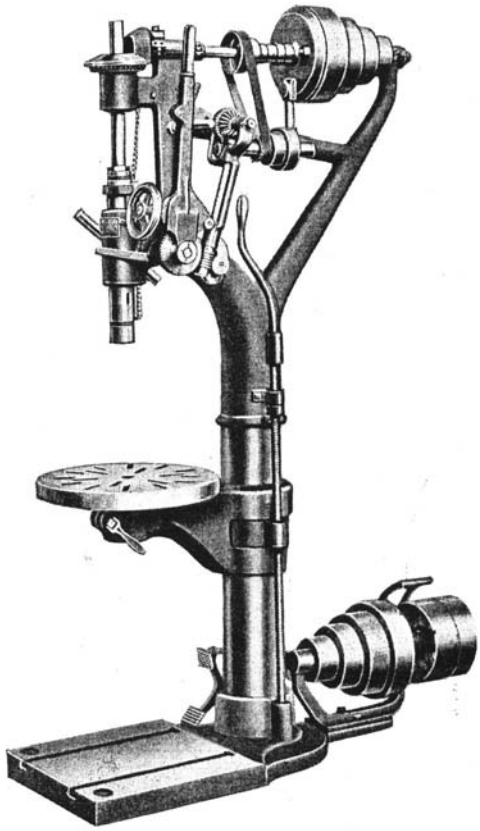


Fig. 862

Fig. 862 with square base, complete as shown; drive shaft with tight and loose pulleys, weight crated, 750 pounds.	$135.00	**Okago**
Fig. 861 with round base, otherwise same as Fig. 862: weight crated, 710 pounds	130.00	**Okafa**
Less power feed and automatic stop, either style, deduct...	20.00	**Okaok**
Friction countershaft for tapping, either style, extra.....	10.00	**Okaif**
V-shaped attachment to fit in supporting arm, for holding wheels to drill the tires, on Fig. 861.....	2.00	**Okaly**
Wheel-holding attachment to clamp to column, with spindle to go through wheel, on Fig. 861.....	5.00	**Okame**

DESCRIPTION OF FIGS. 861 AND 862 DRILLS

Illustrated on opposite page

Particularly designed and adapted to meet the up-to-date and exacting requirements of modern machine shop practice, we believe these 20-inch Power Feed Drills with back gearing and automatic stop, have every good feature that can be demanded in drills of this kind.

Increased strength and efficiency, and more simple and convenient operation are results of the new designs and patterns.

Figs. 861 and 862 Drills have round and square base, respectively, this being the only point of difference between them.

The back gear friction mechanism provides four slow speeds for heavier work, making a total of eight different speeds.

The Automatic Stop requires only to be started and will stop automatically wherever set, at any required depth. This action is entirely independent of the wheel or the lever feed; either of which can be used in addition.

When desired, these drills can be furnished without power feed and automatic stop, at reduction indicated in price list.

In quality, design and finish, these drills stand out strongly. New patterns throughout—every detail carefully worked out—materials the best procurable. Bevel gears are accurately cut from solid blanks, the cog rack is forged from steel and the teeth are milled to gauge. The top shaft has split bearings to permit of taking up wear.

Table has easy up-and-down adjustment and swings to either side.

When the tool is wanted only for drilling, the countershaft for it is provided with tight and loose pulleys, 8 inches diameter by 2¾-inch face, as shown in the accompanying engraving, and should make 200 revolutions per minute. For tapping and drilling, a friction countershaft is required.

Drive Shaft has tight and loose pulleys; turns 1⅔ times to 1 turn of spindle.

DIMENSIONS OF FIGS. 861 AND 862

Height	68¼	inches
Diameter column	5½	inches
Diameter table	16	inches
Diameter spindle	1⅜	inches
Vertical travel of spindle	10	inches
Vertical travel of table	16	inches
Spindle bored for No. 3 Morse taper.		
Distance from column to center of table	10¼	inches
Distance from spindle to base	41⅛	inches
Distance from spindle to table	26⅝	inches
Diameter of crown gear	5 3/16	inches
Diameter of Bevel pinion	3⅜	inches
Diameter large pulley on cone	9¼	inches
Diameter small pulley on cone	4	inches
Cone carries 2-inch belt.		
Tight and loose pulleys	8x 2¾	inches
Floor space—square base	46x16	inches
Floor space—round base	36x20	inches

Boxed for Export

Fig. 861. Net 640 pounds, gross 815 pounds, 370 kilos., 22 cubic feet
Fig. 862. Net 660 pounds, gross 845 pounds, 383 kilos., 22⅓ cubic feet

Silver's 4-Leg Agricultural Lever Forge

We have recently made a new and important addition to our line of portable forges, viz.; The Agricultural Lever Forges. These have been designed especially to meet the demand for a good substantial, all-round portable forge at a low price. The large sale of these forges is the best evidence of their popularity as regards service and price.

We now offer our patrons all the advantages of a selection from a large assortment.

The accompanying cut represents our 4-leg Agricultural Lever Forge with shield.

It is very strong and durable, for although low in price, these qualities have not been sacrificed to make it so.

It is neat and symmetrical in design ,and is made of cast iron with ¾-inch pipe legs, which are firmly screwed into the hearth and are tied together with wrought iron bands to insure rigidity when in action.

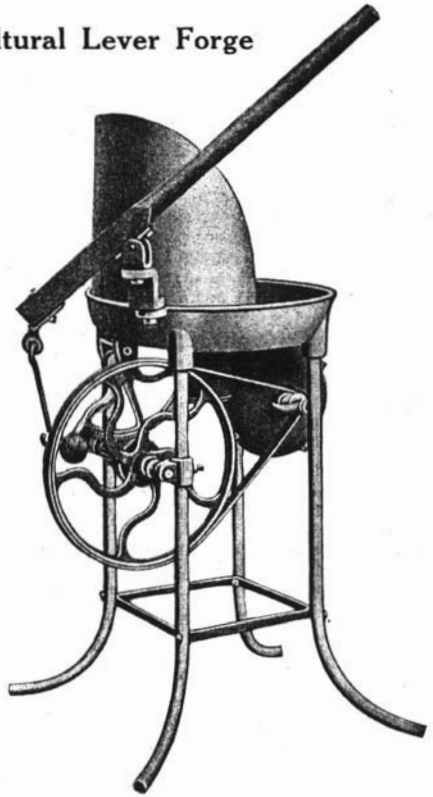


Fig. 930, with Shield

The lever operates a segment gear on a ratchet, which permits the reverse motion while the drive wheel on the same shaft revolves rapidly. A leather belt connects the drive wheel with the blower fan. The result is that a strong lasting blast is produced with very little energy.

These Agricultural Lever Forges are adapted for all kinds of farm work or other general repairing up to their capacity.

SIZE AND PRICE

Height of forge—30 inches.

Diameter of hearth—18 inches, 3¼ inches deep.

Diameter of fan case—8 inches.

Floor space over all—20x23 inches.

No. 5 With shield, weight 75 pounds.....$14.00 **Okapu**

Boxed for Export

Net 75 pounds, gross 125 pounds, 57 kilos., 3 cubic feet

Silver's 4-Leg Agricultural Lever Forge

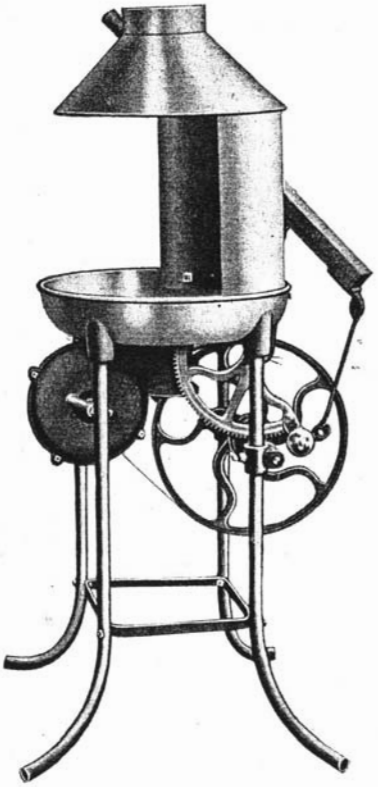


Fig. 931, with Hood

This forge is the same in all respects as Fig. 930 (see opposite page), excepting that it is provided with half hood for stove-pipe connection, instead of shield for outdoor work.

SIZE AND PRICE

Height of forge—30 inches.
Diameter of hearth—18 inches, 3¼ inches deep.
Diameter of fan case—8 inches.
Floor space over all—20x23 inches.

No 5. With open hood, weight 80 pounds.....$16.00 **Okarc**

Boxed for Export

Net 80 pounds, gross 145 pounds, 66 kilos., 6 cubic feet

Silver's 3-Leg Agricultural Lever Forge

The accompanying cut represents our new 3-leg Agricultural Lever Forge with shield. These forges were designed to meet the demand for a good substantial, all-round portable forge at a low price.

They are neat and symmetrical in design, and are made of cast iron, with ¾-inch pipe legs, which are firmly screwed into the hearth and are tied together with wrought iron bands to insure rigidity when in action.

The lever operates a segment gear on a racket, which permits the reverse motion while the drive wheel on the same shaft revolves rapidly. A leather belt connects the drive wheel with the blower fan. The result is that a strong, lasting blast is produced with very little energy.

Fig. 935, with Shield

These forges are low in price, but their strength and durability have not been sacrificed to make them so. They are adapted for all kinds of farm work or other general repairing up to their capacity.

SIZE AND PRICE

Height of forge—30 inches.
Diameter of hearth—22 inches, 3¼ inches deep.
Diameter of fan case—8 inches.
Floor space over all—22x34 inches.

No. 10. With shield, weight 80 pounds.....$16.00 **Okatt**

Boxed for Export

Net 85 pounds, gross 165 pounds, 75 kilos., 5 cubic feet

Silver's 3-Leg Agricultural Lever Forge

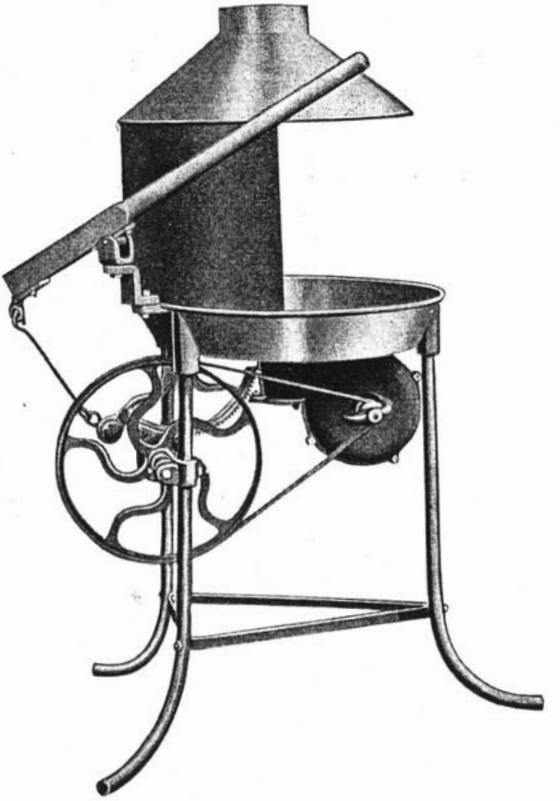


Fig. 936, with Hood

This forge is the same in all respects as Fig. 935 (see opposite page), excepting it is provided with half hood for stove pipe connection instead of shield, for outdoor work.

SIZE AND PRICE

Height of forge—30 inches.
Diameter of hearth—22 inches, 3¼ inches deep.
Diameter of fan case—8 inches.
Floor space over all—22x34 inches.
No. 10. With open hood, weight 85 pounds.....$18.00 **Okauv**

Boxed for Export

Net 95 pounds, gross 165 pounds, 75 kilos., 6¼ cubic feet

Silver's Agricultural Crank Forge

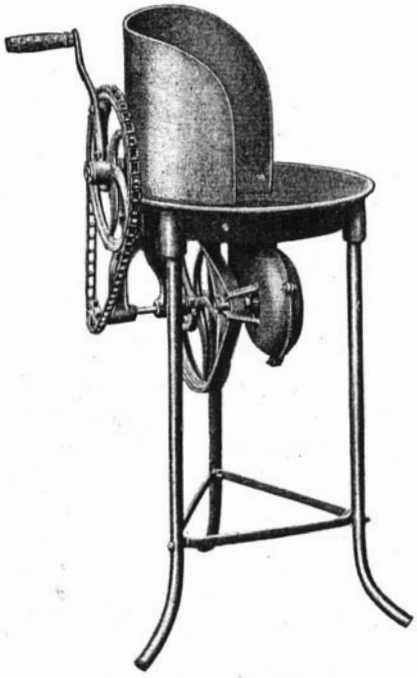


Fig. 901, with Shield

This forge is substantially constructed and is positive in action, being driven by means of a crank and sprocket chain to an intermediate wheel, and from there to the fan wheel by belt.

It is symmetrical in design and has pipe legs, which are tied together at bottom, thus making it stand steady while in action.

It is manufactured on mechanical lines, the high speed bearings being babbitted and the others bored, all of them being properly fitted and ample provision made for keeping them oiled.

The fireplace is separate from the hearth, which avoids breakage of these parts on account of the shrinkage and expansion.

It is adapted to general farm work and for all kinds of repairing up to its capacity.

SIZE AND PRICE

Height of forge—30 inches.
Size of hearth—18 inches diameter, 2½ inches deep.
Size of fan case—7¾ inches diameter.
Floor space over all—25x30 inches.

No. 4. With shield, weight crated, 65 pounds.....$15.00 **Okayd**

Boxed for Export

Net 90 pounds, gross 125 pounds, 57 kilos., 3⅔ cubic feet

Silver's Agricultural Crank Forge

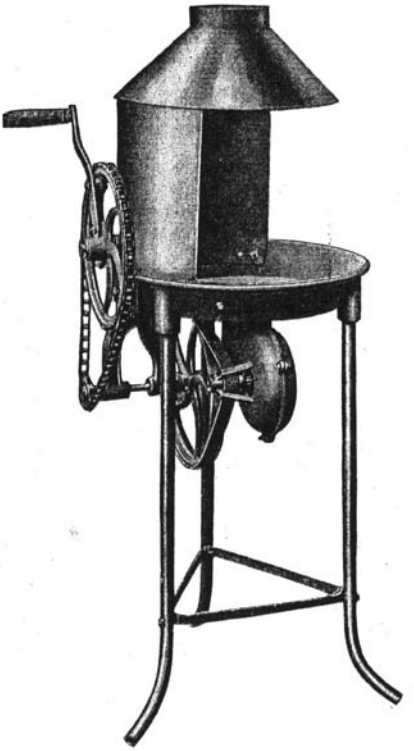


Fig. 902, with Hood

This forge is the same in all respects as Fig. 901 (see opposite page), excepting that it is provided with half hood instead of shield.

SIZE AND PRICE

No. 4. With open hood, weight crated, 70 pounds.....$17.00 **Okbit**

Boxed for Export

Net 75 pounds, gross 130 pounds, 59 kilos., 3¾ cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

The construction of this forge is substantial and on lines that make it light running and positive in action.

The clutch is of special design and is positive in action and economical in point of service and wear.

It has pipe legs, which give strength and symmetry. The legs are fastened on in a substantial manner so that they don't wobble.

The lever support is a swivel, which permits the lever to follow the motion of the arm while in use.

The boxes are provided with oil cups and the shafts are correctly fitted into the bearings, and if these parts are properly lubricated they will last a lifetime. The oil cups are dust proof and self-closing.

The shaft that attains speed—the fan shaft—is provided with ball bearings which lighten the draft and save wear.

The fireplace is separate from the hearth, which saves breakage in expansion and shrinkage of these parts.

They are recommended for blacksmiths, repairmen, quarrymen, boilermakers, bridge builders, in mines, on farms, and every place where light smithing is done.

Will heat iron 1½ inches diameter to welding heat.

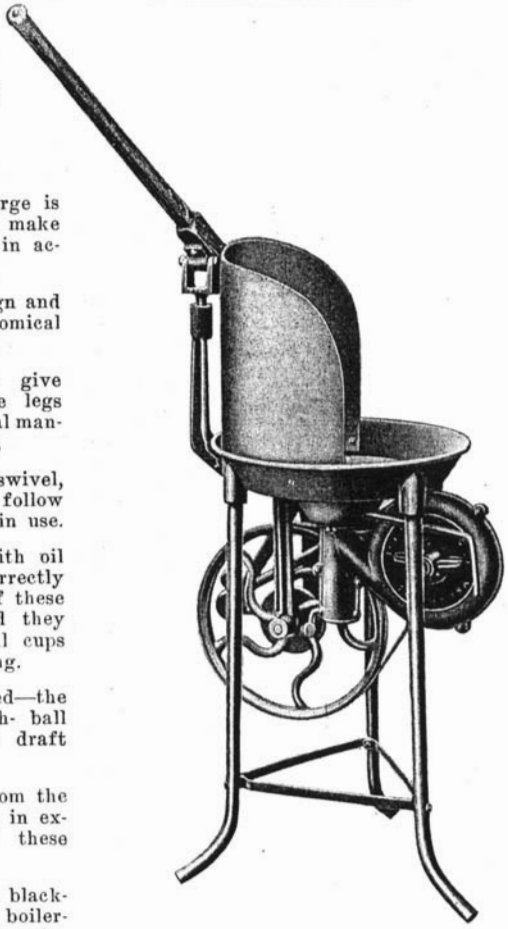


Fig. 910

SIZE AND PRICE

Height of forge—30 inches.
Size of hearth—18 inches diameter.
Size of fan—9 inches diameter.
Floor space over all—25x36 inches.

No. 3. With shield, as shown, weight crated, 100 pounds.....$22.00 **Okbri**

Boxed for Export

Net 90 pounds, gross 125 pounds, 57 kilos., 4½ cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

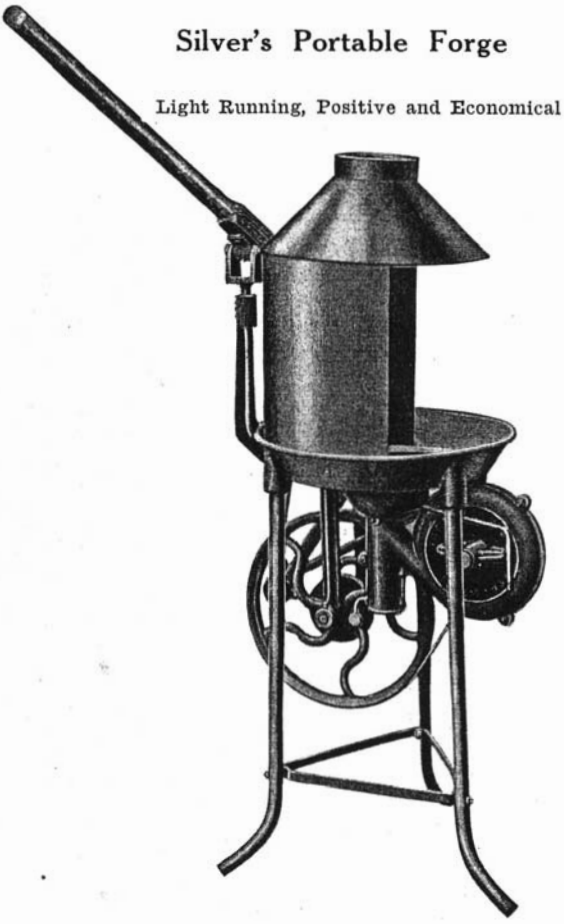


Fig. 904

This forge is the same in all respects as Fig. 910 (see opposite page), save in the hood which is the only point of difference.

This forge is made with open hood, as illustrated, and with closed hood, as listed.

SIZE AND PRICE

No. 3.	With open hood, weight crated, 105 pounds.....	$24.00	**Okbus**
No. 3.	With closed hood, weight crated, 115 pounds.....	26.00	**Okday**

Boxed for Export

Net 95 pounds, gross 175 pounds, 79 kilos., 6¼ cubic feet.

Silver's Portable Forge

Light Running, Positive and Economical

The design and construction of this forge is on mechanical and symmetrical lines, resulting in a strong light-running, economical tool.

The legs are of pipe, giving strength and symmetry. They are firmly screwed into hearth and tied together in a manner to prevent their wobbling.

The lever, supported on a swivel, follows the motion of the arm while in use.

The clutch is of a special design that insures positive action.

The boxes are provided wth oil cups and the shafts are correctly fitted into the bearings. If these parts are properly lubricated they will last a life-time. The oil cups are dust-proof and self-closing.

The shaft that attains speed—the fan shaft—is provided with ball bearings which lighten the draft and save wear.

The fireplace is separate from the hearth, which saves breakage in expansion and shrinkage of these parts.

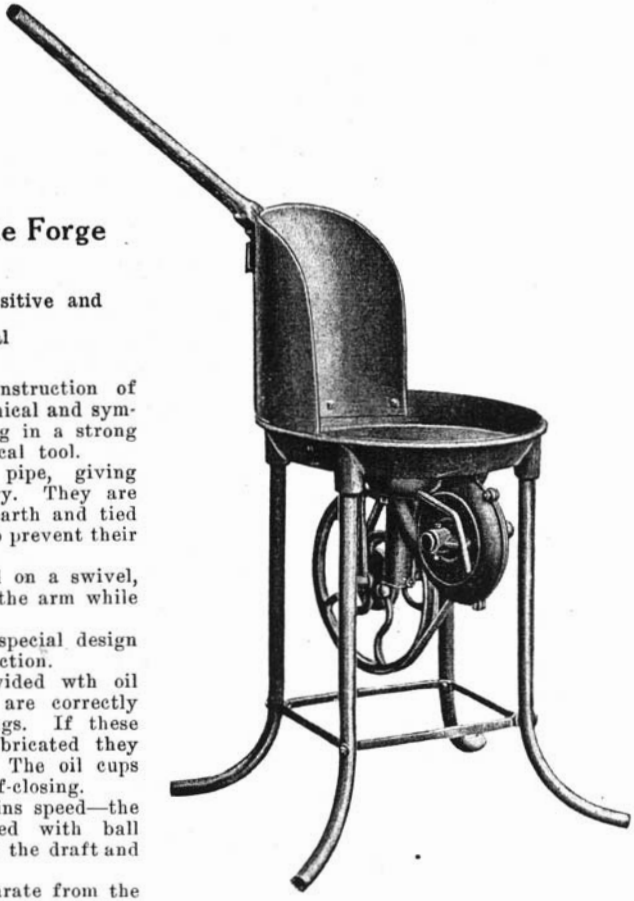


Fig. 915

It is recommended for blacksmiths, repairmen, quarrymen, boilermakers, bridge builders, in mines, on farms, and every place where light and medium smithing is done.

Will heat iron 2 inches diameter to welding heat.

SIZE AND PRICE

Height of forge—30 inches.
Size of hearth—22 inches diameter.
Size of fan—9 inches diameter.
Floor space over all—24x36 inches.

No. 2½ With shield, weight crated, 130 pounds.....$24.00 **Okdeh**

Boxed for Export

Net 110 pounds, gross 165 pounds, 75 kilos., 5 cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

Fig. 905

This forge is the same as Fig 915 (see opposite page), excepting that it is made with open hood, as shown, instead of with shield.

SIZE AND PRICE

No. 2½ With open hood, weight crated, 135 pounds.....$27.00 **Okdiw**
Net 115 pounds, gross 175 pounds, 79 kilos., 6¼ cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

This forge is large and roomy and has a strong blast, which adapts it to the requirements of horseshoers, boilermakers, bridge builders and general smithing.

The clutch is of special design and is positive in action and economical in point of service and wear.

The legs are wrought pipe and are held in sockets which are bolted to bottom of hearth; the legs are braced by heavy iron rods running diagonally and held rigidly by a clamp at point where they cross.

The lever support is a swivel, which permits the lever to follow the motion of the arm while in use.

The boxes are provided with oil cups and the shafts are correctly fitted into the bearings, and if these parts are properly lubricated they will last a lifetime. The oil cups are dust proof and self-closing.

The fan shaft is provided with ball-bearings, which lighten the draft and save wear.

The fireplace is separate from hearth, which saves breakage in expansion and shrinkage of these parts.

Fig. 920

These points make a strong, durable, light running forge, and one that is capable of most any kind of smithing. Will heat iron 3 inches diameter to welding heat.

SIZE AND PRICE

Height of forge—30 inches. **Size of fan**—12 inches diameter.
Size of hearth—24x35½ inches. **Floor space over all**—47x58 inches.
No. 2. With shield, weight crated, 200 pounds.....$36.00 **Okdos**
Boxed for Export, Net 170 pounds, gross 250 pounds, 113 kilos., 7 cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

Fig. 906

This Forge is like Fig. 920 (see opposite page), except that it is made with open hood, as shown, instead of with shield.

SIZE AND PRICE

No. 2. With open hood, weight crated, 210 pounds.....$40.00 **Okdro**

Boxed for Export

Net 175 pounds, gross 305 pounds, 138 kilos., 8¼ cubic feet

Silver's Portable Forge

This is a large size forge of new design. The hearth measures 29½ inches wide its entire length and is 46½ inches long. Instead of having a small coal box built in the end of the hearth the bottom is made straight and the sides are increased in height, which provides ample room for a good supply of coal. The bottom being straight the coal is easily drawn into the fire by means of the rake or shovel. There is also ample room for tools and material.

Fig. 907

Other good features of this forge are the swivel lever support, the boxes, that are provided with dust-proof, self-closing oil cups; the ball, bearing, high speed fan shaft, which lightens the draft and saves wear; and the fireplace, which is separate from the hearth, avoiding bad results due to expansion or shrinkage of these parts.

The design of the forge is symmetrical throughout, and is also practical. It is a very substantial tool, and is adapted to all kinds of smithing up to heating iron 3 inches in diameter to welding heat.

SIZE AND PRICE

Height of forge—30 inches. **Size of hearth**—29½x46½ inches.
Size of fan—15 inches **Floor Space over all**—55x58 inches.

No. 1. With open hood, weight crated, 330 pounds.....$50.00 **Okdut**
Net 285 pounds, gross 400 pounds, 181.4 kilos., 10½ cubic feet

Silver's Portable Forge

Light Running, Positive and Economical

Fig. 925

This forge is the same as Fig. 907 (see opposite page), except that it is supplied with water tank, as shown in the illustration.

SIZE AND PRICE

No. 1. Complete, with open hood and water tank, weight crated, 375 pounds ..... $55.00 **Okdwu**

Boxed for Export

Net 335 pounds, gross 440 pounds, 199.5 kilos., 11 cubic feet

PRICE LIST

OF

REPAIRS OR EXTRA PARTS

Taylor's New Taper Hub-Boring Machine

Fig. 706

PART	Fig. 706—No. 4		Fig. 706—No. 5	
	Casting No.	Price	Casting No.	Price
Main casting	553	$3.00	566	$4.00
Double leg	554	4.00	554	4.00
Single leg	555	1.00	555	1.00
Mandrel plate	556	2.50	567	3.00
Mandrel bearing	557	3.00	568	4.00
Mandrel	....	4.50	....	6.00
Stationary ring or center	558	3.00	569	4.00
Revolving ring or center	560	2.00	570	2.50
Revolving center plate	A560	1.25	A570	1.75
Jaw center	559	2.50	571	3.00
Jaws, per set (three)	....	2.50	....	2.50
Face plate or large ring	561	1.75	572	3.00
Clamp hooks in face plate	....	.30	....	.30
Scroll plate	562	3.00	573	4.50
Thumb screws for mandrel plate, each	....	.25	....	.25
Cross feed screw with hand wheel	563	1.00	563	1.00
Adjusting screws comp. with nuts, each	....	.60	....	.75
Crank	564	.60	564	.60
Yoke for locking mandrel coupling	....	.75	....	.75
Open feed nut	565	2.25	574	2.50
Collar for open feed nut	....	.60	....	.75
Dog for driving feed nut	....	.30	....	.30
Bits, round or square nose, each	....	.25	....	.25

REPAIR LIST

Silver's Taper Hub-Boring Machines

Figs. 708 and 709

PART	Fig. 709		Fig. 708
	No. 2	No. 3	Power
Iron stand	$5.00	$5.00	$10.00
Bed plate or main casting	5.00	6.00	10.00
Large revolving center	4.50	6.00	7.50
Center, with slides to receive jaws	2.50	3.00	3.00
Scroll plate	3.00	4.50	4.50
Jaws, per set (three)	2.50	2.50	2.50
Face plate or large ring	1.75	3.00	3.00
Clamp hooks in face plate	.30	.30	.30
Adjusting screw complete with nuts	.60	.75	.75
Handle	.30	.45	.45
Large mandrel or arbor	....	6.00	6.00
Small mandrel or arbor	4.50	6.00	6.00
Bushing for small mandrel	....	.75	.75
Sleeve or ball bearing for mandrel	2.50	3.00	3.00
Cap over ball bearing	.60	1.00	1.00
Open feed nut, without collar	2.25	2.50	2.50
Collar for open feed nut	.60	.75	1.50
Tail piece or back bearing for mandrel	1.25	1.50	1.50
Yoke for tail piece	.60	.75	.75
Pulley	....	....	3.00
Lever to operate open feed nut	....	....	1.50
Stationary arm for lever	....	....	.75
Gauge plate	.60	.75	.75
Bits, per set (four)	1.00	1.00	....
Bits, per set (five)	....	....	1.25

REPAIR LIST

Silver's Old Standard Hub-Boxing Machine and Silver's Double Chuck Taper Hub-Boxing Machine

PART	Figure 710			Fig. 714
	No. 1	No. 1½	No. 2	
Barrel or upright	$3.00	$3.50	$4.00	....
Center or slide arms	5.50	6.00	6.50	$4.50
Scroll plates	....	....	....	4.50
Mandrel	3.00	4.50	5.50	6.00
Jaws, per set	5.00	5.50	6.00	3.50
Open feed nut	5.00	5.50	6.00	5.50
Jaws for open feed nut, per set	1.50	2.00	2.50	1.50
Center for open feed nut	1.50	1.75	2.00	1.50
Cap for open feed nut	1.50	1.75	1.75	1.50
Gauge plate	.60	.60	.60	.60
Handle, with plate and screw	.75	.75	.75	.75
Pinion shafts, each	1.25	1.50	1.75	....
Intermediate cog wheel	1.00	1.00	1.00	....
Revolving disc and slides	....	....	....	2.00
Rule to adjust bits	....	....	....	1.00
Bits, per set	.75	.75	1.00	.75
Gib for jaw	.25	.25	.25	....
Gib for gauge plate	.15	.15	.15	.15
Malleable wrench	.25	.25	.25	.25

Dole's Hub-Boxing Machines

Figs. 711 and 712

PART	No. 1	No. 2	No. 3
Scroll plate	$3.50	$3.50	$4.50
Center (upright stem and slide)	3.75	3.75	4.50
Jaws, per set	2.75	2.75	3.50
Mandrel	3.00	3.00	4.50
Handle, with plate and screw	.75	.75	.75
Common feed nut	1.25	1.25	1.25
Open feed nut	5.00	5.00	6.00
Cap for open feed nut	1.50	1.50	1.75
Jaws for open feed nut, per set	1.50	1.50	2.50
Center for open feed nut	1.50	1.50	2.00
Gauge plate	.60	.60	.60
Bits, per set	.60	.75	.85
T wrench	.50	.50	.50

REPAIR LIST

"Star" Hollow Auger

Fig. 715

PART	No. 1	No. 2	No. 3	No. 4
Stock	$2.50	$7.50	$8.50	$9.50
Brass ring	1.50	1.75	2.00	2.50
Face plate	1.00	1.50	2.00	2.50
Screws, per set	.15	.15	.25	.25
Brace shank (not adjustable)	.50	.50	....	....
Adjustable brace shank	1.50	....	....	....
Bits, per set	1.00	1.50	1.50	1.50
Blanks, per set	.60	.80	.80	.80

Spoke Tenon Machines

Figs. 716, 717, 718

PART	No. 1	No. 2, 2½	No. 3, 3½	No. 4, 4½
Head or main casting	$3.50	$4.00	$5.50	$6.50
Stand for main casting	1.50	2.00	2.00	3.00
Pinion shaft	.75	1.00	1.00	1.00
Pinion for same	.25	.40	.40	.40
Mandrel	1.75	2.00	2.50	3.50
Pulley	....	....	2.00	2.00
Fly wheel	....	....	2.00	3.50
Handle for fly wheel	....	....	.25	.25
Crank, with handle	.75	1.00	....	....
Felloe boring attachment	5.00	7.00	7.00	7.00
Self-centering chuck	8.00	8.00	8.00	8.00
Center for self-centering chuck	2.50	2.50	2.50	2.50
Scroll plate for same	2.50	2.50	2.50	2.50
Jaws for same, per set	2.50	2.50	2.50	2.50
Feed lever	.50	.75	.75	1.00
Feed rack	.75	1.00	1.00	1.25
Spoke rest	.25	1.50	1.50	1.75
Guide for spoke rest	....	1.00	1.00	1.00
Lever for spoke rest	.25	.30	.30	.30

Felloe Boring Attachment, Part of Spoke Tenon Machine

PART	No. 1	No. 2, 2½	No. 3, 3½	No. 4, 4½
Block	$1.00	$1.50	$1.50	$1.50
Block bolt and nut	.50	.50	.50	.50
Washer	.10	.10	.10	.10
Felloe guides, per set	.25	.25	.25	.25
Arch	1.00	1.50	1.50	1.50
Arch screw	.75	1.00	1.00	1.00
Arch bolts	.20	.30	.30	.30
Arch wrench	.10	.10	.10	.10
Bit chuck	2.00	2.50	2.50	3.00

REPAIR LIST

Silver's Improved Band Saws

PART	20-Inch		26-Inch		32-Inch		36-Inch	
	Cast'g No.	Price	Cast'g No.	Price	Cast'g No.	Price	Cast'g No.	Price
Frame	1000	$25.00	1030	$47.50	1060	$60.00	1090	$75.00
Large table	1001	5.00	1031	9.00	1061	13.00	1130	15.00
Small table	1002	1.50	1032	2.00	1062	3.00	1093	4.00
Band wheels complete with tire(each)	1003	6.00	1033	10.00	1063	13.50	1094	17.00
Upper shaft	.....	1.00	.....	1.25	.....	1.25	.....	1.50
Rubber tires, each	.....	1.25	.....	1.60	.....	2.50	.....	3.25
Brass bushing for upper band wheel	.....	.....	.....	.....	.....	.....	.....	1.50
Sliding head, former style	1028	1.50	.....	.....	.....	.....	.....	.....
Sliding head	1004	1.50	1034	5.00	1034	5.00	1095	6.50
Apron for sliding head with bearing	.....	.....	1035	2.50	1035	2.50	1096	3.50
Taper pin for sliding head	.....	.....	.....	.30	.....	.30	.....	.40
Spring cap	.....	.....	1050	.20	1036	.25	1097	.30
Journal box, babbitted	1007	1.25	1037	2.00	1064	2.50	1098	3.00
Journal caps, babbitted, each	1008	.50	1038	.75	1065	1.00	1099	1.25
Oil covers for journal caps, each	.....	.....	1047	.10	1116	.10	1116	.10
Tension screw	1009	1.00	.....	1.25	.....	1.75	.....	2.00
Hand wheel for tension screw	.....	.....	1115	.75	1100	1.25	1100	1.25
Shifter sleeve	1010	.55	1045	1.00	1101	1.40	1101	1.40
Saw guard holder, back	1012	.20	1041	.30	1041	.30	1102	.35
Saw guard holder, front	.....	.....	1042	.30	1042	.30	1103	.45
Table segment	1013	1.00	1043	3.50	1043	3.50	1104	5.00
Lever for adjusting table	1015	.30	1105	.40	1105	.40	1105	.40
Lock for table	.....	.....	1044	.60	1044	.60	1106	.75
Balance weight	.....	.....	.....	.....	.....	.....	1107	3.00
Socket for spring tension	.....	.....	1048	.40	1048	.40	1109	.80
Lower guide, complete	1110	.60	1110	.60	1110	.60	1110	.60
Shifter clamp	1006	.30	1111	.40	1111	.40	1111	.40
Hand wheel for table lock	.....	.....	1112	.50	1112	.50	1112	.50
Pinion for table segment	.....	.....	1113	.30	1113	.30	1113	.30
Nut for tension screw (inside)	1018	.15	1049	.20	1066	.25	1114	.30
Hand wheel with screw, for upper wheel	1019	.80	1135	.80	1135	.80	1135	.80
Hand wheel with screw, for guide bar	.....	.....	1135	.60	1135	.60	1135	.60
Saw guide holder	.....	.....	1069	.60	1069	.60	1125	.60
Saw guide adjuster	.....	.....	1070	.50	1071	.60	1126 1127	.30 .40
Brazing clamp	1068	1.20	1068	1.20	1068	1.20	1068	.20
Brazing tongs	.....	1.20	.....	1.20	.....	1.20	.....	1.20
Upper guide, old style	1011	2.00	.....	.....	.....	.....	.....	.....
Upper guide, present style	1026 1027	1.00	.....	.....	.....	.....	.....	.....
Upper shank, used with Wright's guide only	1029	.50	.....	.....	.....	.....	.....	.....
Wright's Pat. non-friction roller saw guide	(No. 0)	6.00	(No. 0)	6.00	(No. 1)	8.00	(No. 1)	8.00
Stationary nut for tension screw	.....	.....	.....	.30	.....	.35	.....	.40
Oil cup for upper wheel bearing	.....	.40	.....	.50	.....	.50	.....	.60
Collars for upper wheel and lower shaft, each	.....	.75	.....	.75	.....	.75	.....	.75
Inside hand wheel for upper wheel	.....	.....	.....	.30	.....	.30	.....	.30
Spring for cap on tension screw	.....	.....	.....	.40	.....	.50	.....	.60
Spring case or collar	.....	.....	.....	.30	.....	.40	.....	.50
Shifting lever and handle	.....	1.50	.....	1.75	.....	2.00	.....	2.25
Shifter rod for belt	.....	.35	.....	.40	.....	.50	.....	.60
Shaft for tilting table	.....	.....	.....	1.90	.....	2.10	.....	2.25
Main shaft	.....	.90	.....	2.50	.....	4.00	.....	5.50
Hex. guide bar	.....	.80	.....	1.50	.....	2.25	.....	3.50
Belt pulleys, tight and loose, each	.....	2.00	.....	3.00	.....	3.50	.....	4.00

Extra Parts for Foot Power Machines only

Foot lever	1051	$2.25	1056	$3.00	.....	.....	.....	.....
Pitman	1052	.75	1058	.75	.....	.....	.....	.....
Foot lever bracket	1016	1.00	1057	1.00	.....	.....	.....	.....
Pin block for foot lever	1053	.40	1053	.40	.....	.....	.....	.....
Gear links, (2 alike) each	1054	.40	1054	.40	.....	.....	.....	.....
Gears, (2 alike) each	1055	.50	1055	.50	.....	.....	.....	.....
Extra foot lever for 2 men	.....	.....	1073	3.00	.....	.....	.....	.....
Lower wheel	1072	8.00	1059	12.50	.....	.....	.....	.....

Silver's Hand Post Drills

Figs. 730, 731, 732, 734

PART	Fig. 730, No. 1½		Fig. 731, No. 1		Fig. 732, No. 2		Fig. 734, No. 3	
	Casting No.	Price	Casting No.	Price	Casting No.	Price	Casting No.	Price
Frame	525	$3.50	530	$4.50	510	$5.00	512	$7.00
Fly wheel	....	....	....	2.00	506	2.50	....	3.00
Drive gear wheel	526	1.25	532	1.50	503	1.50	513	2.00
Bevel pinion	527	.75	531	.75	502	.75	....	1.00
Pinion of fly wheel shaft	....	....	....	.50	....	.50	....	.60
Hand feed wheel	524	.50	517	.50	517	.50	517	.60
Feed screw	....	.75	....	.75	....	.75	....	.75
Feed nut	....	.75	....	.75	....	.75	....	.75
Brass coupling nut	....	.75	....	.75	....	.75	....	.75
Spindle	....	1.50	....	1.75	....	2.00	....	2.50
Fly wheel shaft	....	....	....	.75	....	.75	....	1.00
Drive gear stud	....	.75	....	.75	....	.75	....	.90
Feed arm and pawl	....	....	533	.50	501	.60	518	.75
Friction feed wheel	....	....	....	....	....	.30	....	.40
Crank	....	.60	....	.60	....	.75	....	.80
Upright column	....	.75	....	.75	....	1.25	....	2.00
Supporting arm (table rest)	528	1.00	528	1.00	504	1.25	514	1.40
Swing table plate	529	.50	529	.50	505	.75	515	.90
Step or support for upright column	....	.25	....	.25	....	.30	....	.40

Silver's Power Drills

Figs. 727, 850, 852 and 855 to 862

Only an occasional repair is wanted, and prices are quoted upon application

REPAIR LIST

Silver's Advance Drills

Figs. 741, 742, 746, 743, 748, 744, 750

PART	No. 12 Price	No. 13 Price	No. 14 Price
Frame	$5.00	$7.00	$12.00
Fly wheel	2.50	3.00	3.50
Drive gear wheel	1.50	2.00	2.50
Bevel pinion	.75	1.00	1.25
Pinion on fly wheel shaft	.50	.60	.75
Intermediate pinion	....	.60	.75
Feed wheel	.50	.60	.75
Feed wheel handle	.10	.10	.10
Feed screw	.75	.75	.90
Feed nut	.75	.75	.90
Brass coupling nut	.75	.75	.90
Spindle	2.00	2.50	3.00
Fly wheel shaft	.75	1.00	1.50
Drive gear stud	.75	.90	1.00
Intermediate gear stud	....	.90	1.00
Feed arm and pawl	.60	.75	.90
Crank	.75	.80	.90
Upright column	1.25	2.00	3.50
Supporting arm for table*	1.25	1.40	1.75
Swing table plate	.75	.90	1.50
Hanger for upright column	.30	.40	.60
Thumb screw to hold table plate	.10	.10	.10
Crank hub	.40	.50	.50
Iron column, Fig. 741	1.50	....	....
Ratchet, Fig. 741	.25	....	....
Tight pulley	2.50	2.50	2.50
Loose pulley	2.50	2.50	2.50
Collar for pulleys on fly wheel shaft	.30	.30	.30

*Note—Casting for supporting arm for No. 12 table is No. 504.

REPAIR LIST

Agricultural Crank Forges

Figs. 901, 902

PART	Casting No.	Price
Hearth or pan	943	$3.00
Fan case (left side)	944	1.00
Fan case (right side)	945	1.00
Spider and fan	...	.50
Shaft hanger	946	1.50
Adjustable side casting	947	1.50
Damper plate or ash door on fan case	948	.25
Tuyere plate	949	.40
Band wheel	950	1.50
Band wheel shaft	...	.50
Belt for band wheel	...	1.50
Driving sprocket	951	1.50
Small sprocket	953	.40
Stud for driving sprocket	...	.20
Chain for sprocket, per foot	25	.10
Fan shaft and pulley	...	.20
Shield	...	.50
Hood	...	1.50
Crank for sprocket	...	.75
Legs (each)	...	.50
Brace for legs	...	.50

REPAIR LIST

Silver's Portable Forges

Figs. 904, 910, 905, 915

PART	No. 3		No. 2½	
	Casting No.	Price	Casting No.	Price
Hearth	....	$3.00	....	$5.00
Fire bowl	902	.75	902	.75
Tuyere plate	903	.40	903	.40
Tuyere damper with wrought iron lever	....	.50	....	.50
Fan case	912	1.50	912	1.50
Fan case	913	1.50	913	1.50
Fan complete with paddles	....	1.25	....	1.25
Fan shaft	....	.50	....	.50
Pulley on fan shaft	....	.50	....	.50
Cap for ball bearing	....	.30	....	.30
Ash damper with cast iron lever	....	.25	....	.25
Fly wheel, old style	907	2.25	907	2.25
Fly wheel, present style	897	2.25	897	2.25
Fly wheel shaft	....	.60	....	.60
Clutch hub for fly wheel, old style	908	1.00	908	1.00
Clutch hub for fly wheel, present style	898	1.00	898	1.00
Clutch plate	911	1.00	911	1.00
Clutch fingers, each	910	.40	910	.40
Hanger for fly wheel shaft, babbitted	905	1.50	905	1.50
Rocker arm	906	1.25	906	1.25
Wood lever	....	.50	....	.50
Lever post	904	.90	904	.90
Swivel for lever post	922	.30	922	.30
Bearing on lever for swivel	923	.25	923	.25
Eye plate on lever	909	.30	909	.30
Shield	....	.50	....	.50
Open hood	....	1.50	....	2.00
Closed hood	....	2.00	....	2.50

REPAIR LIST

Silver's Portable Forges

Figs. 906, 920, 907, 925

PART	No. 2		No. 1	
	Casting No.	Price	Casting No.	Price
Hearth	....	$8.00	....	$12.00
Fire bowl	933	1.75	937	2.75
Tuyere plate	....	.50	....	.60
Tuyere damper with wrought iron lever	....	.50	....	.60
Fan case, right	R902	1.75	927	2.25
Fan case, left	L902	1.75	926	2.25
Fan complete with paddles	....	2.00	....	2.50
Fan shaft	....	.60	....	.60
Pulley on fan shaft	....	.50	....	.50
Bearings for fan shaft, each	....	....	....	.30
Caps for ball bearing, each	....	.30	....	....
Rests for fan shaft bearings, each	....	....	932	.30
Ash damper with cast iron lever	....	.40	....	.50
Fly wheel, old style	935	3.75	925	5.00
Fly wheel, present style	938	3.75	938	3.75
Clutch hub for fly wheel, old style	930	1.25	930	1.25
Clutch hub for fly wheel, present style	939	1.25	939	1.25
Clutch plate	929	1.25	929	1.25
Clutch fingers, each	931	.50	931	.50
Fly wheel shaft	....	.75	....	.75
Bearings for fly wheel shaft, each	....	.50	....	.50
Hanger for fly wheel shaft, right	918	1.25	918	1.25
Hanger for fly wheel shaft, left	921	1.25	921	1.25
Rocker arm	924	1.50	924	1.50
Bearing for rocker arm	919	.40	919	.40
Turned pin for rocker arm	....	.25	....	.25
Wood lever	....	.50	....	.50
Lever post	920	1.00	920	1.00
Swivel for lever post	922	.30	922	.30
Bearing on lever for swivel	923	.25	923	.25
Eye plate with weight on lever	928	.40	928	.40
Half sockets for pipe legs, each	....	.20	....	.20
Shield	....	.75	....	....
Open hood	....	3.00	....	3.50